

Probing on Integration of Feasible Special Skills Courses to Reinforce and Distinguish B. Arch. Degree Course

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Abstract: ‘Architecture’, owes responsibility beyond built environments, to deliver holistic Design solutions for Organized and Sustainable Development that would bridge the rifts between the resource needs of present and future generations. Urban, Environmental, Regional Planning together with Architecture should necessarily behave Intrinsic of each other for Sustainable Development. The process of ‘Planning’ creates Sync and makes the Development ‘Inclusive’, yielding the desired outcomes. Architectural Education in India, if fortified with special skills in allied fields, would lay a strong foundation for the fraternity at large. This emphasizes the need to equip Primary Architectural Education with a momentous Philosophy. Evolving a skill based educational programme is one such valuable philosophy. A Skill-based Educational Program, would thereby blend academics and Industry Expertise for the sound development of Students. This study is an attempt at exploring the philosophy of skill-fortified architectural education while considering areas of collaborations with various other programmes offered by reputed skilling oriented Sectors that could reinforce Architectural Education and generate valuable workforce.

Key Phrases:

1. Architecture’, owes responsibility
2. Architectural Education in India, if fortified with special skills in allied fields
3. Evolving a skill based educational programme
4. Areas of collaborations with various other programmes
5. Reinforce Architectural Education and generate valuable workforce.

I. Introduction: Evolution of Architectural Education in India in the former decades

The Council of Architecture [COA] (1) has been governing the standards of Architectural Education in India as provided for in the Architects Act 1972, with the approval of Government of India. Accordingly it states that “The ‘Council of Architecture’ had prescribed the ‘Council of Architecture (Minimum Standards of Architectural Education) Regulations, 1983’, in the year 1983. Since then, the architectural education underwent a significant change. These standards were reviewed with a fresh perspective, keeping in mind the present demands of

the architectural education in the country and were introduced with changes, wherever necessary.” According to the COA.

These standards were later prescribed and adopted by the Council as ‘Council of Architecture - Minimum Standards of Architectural Education, 2008’, which supplemented the Regulations of 1983. After conscious deliberations and rigorous effort, the COA has now proposed to the MHRD the ‘Minimum Standards of Architectural Education, 2017’ that shall come in force from the date of their publication in the Official Gazette. The COA has been prescribing and ensuring efficient Architectural Education in India based on the succeeding criteria: Short Title and Commencement, Definitions, Duration and Stages of the Course, Admission to the Architecture Course, Intake and Migration, Courses and periods of Studies, Professional examination, Standards of proficiency and conditions of admissions, qualification of examiners, Standards of staff, equipment, accommodation, training and other facilities for technical education with description of Subjects of Examination and minimum number of periods in the Stage-I and II of the Course, Brief description of the subjects listed in the Stage-I and II of the Course, Statement showing the designation, pay-scale and qualification etc. required to be prescribed for faculty positions, and Physical Facilities pertaining to the Institute imparting Architectural Education in India.

This research investigates in the identification of the areas of collaborations under the other programmes offered by relevant Sector Skills Councils under the National Skills Development Corporation mission. These areas of association would be useful in reorienting and fine-structuring the original philosophy of various institutes imparting Architectural Education in India. In an attempt to achieve this objective, a primary analysis and modeling of integrating skills courses offered by one such Sector Skills Council, i.e. the Indian Plumbing Skills Council has been analyzed, that could reinforce Architectural Education and generate a treasured workforce.

II. Feasibility Analysis for Indian Plumbing Skills Council Courses to be integrated with B. Arch.:

Thus **810** contact periods shall be available for **Subjects of choice** for the first three years, while **144** contact periods shall be available for **Subjects of choice** for of B. Arch. Degree Course to be offered to Students.

Table 1: Statistics of Available Course Periods for ‘Subjects of Choice

Stage of course	As per old 1983 regulations		As per new 2008 regulations	
	Stage 1	Stage 2	Stage 1	Stage 2
Calculation Of Periods	6 semesters/ 3 Years @ Rate 30 Periods Per Week X 16 Weeks/sem.	3 Semesters/ 1.5 Years +1 Semester Practical Training	6 Semesters/3 Years @ Rate 30 Periods per week X 18 weeks/ sem.	2 Semesters + 2 Semesters/ 1 Year Practical training
Minimum Total Contact periods	2880	1440	3240*	936*
Minimum No. Of Periods of 50 to 60 Minutes durations For ‘suggested Primary subjects’	2310 (= 75% Of Minimum Total Contact Periods)	1110 (= Approx. 75% Or exact 77% of Minimum Total Contact periods)	2430* (= 75% Of Minimum Total Contact periods)	792* (= Approx. 86.66% as Prescribed Or actual 84.61% of Minimum Total Contact Periods)
Contact Periods With Flexibility To Institutes For ‘Subjects of choice’	570 (25% Of Total Contact Periods @ Stage 1)	360 (25% Of Total Contact periods @ stage 2)	<u>810 *</u> (25% Of Total Contact Periods@ Stage 1)	<u>144*</u> (= approx.13.33% as Prescribed Or Actual 15.38% of total Contact Periods @stage 2)

Source: COA Minimum standards of Architectural Education 1983 and COA Minimum standards of Architectural Education 2008

Note: The above statistics are analyzed and tabulated based on COA Minimum Standards of Architectural Education 1983 and 2008 only.

On analysing the Course Structure guidelines by COA, it is relevant that the Council states that the emphasis on teaching various subjects may vary from institution to institution. New subjects may be introduced and certain subjects given less emphasis depending upon the educational philosophy of the institution and context of the region where the institution is located.

- On analysing the Course Requirements for B. Arch., it has been observed that amongst the Primary Subjects at **Stage 1**, the Subject '**Building Services and Equipment**' covers all the major services like *Study of and design & detailing for water supply, drainage, sewage disposal, garbage disposal, electrification, illumination, air conditioning, fire hazard protection, HVAC, acoustical treatment, rainwater harvesting etc. in buildings and building premises, disaster management systems, intelligent energy conservation systems, electronic security and surveillance systems for buildings.* This subject has been suggested by COA to consume minimum about 90 contact hours in 6 semester duration.

- At **Stage 1** of the course, Group Subjects like Interiors/ Eco Architecture/ Construction Technology are available for Specialization in B. Arch. Courses. **However, in case of Non-Specialized courses, other Skill-orientated subjects can be blended with sub-courses in these premises in the form of Electives of Choice** to suit the **Institute Philosophy**. Subjects like Soil Studies, Ecology, Site management, Advance Surveying & Levelling, Design of services can be **structured to integrate allied Skill based activities** in the form of **Workshops, apart from IPSC Courses.**

- **Thus, 810 Contact Periods at Stage 1** could be **evenly distributed** amongst Subjects of Choice **Including the Integrated Skills Courses with IPSC.**

- Correspondingly, on analysing the Course Requirements for B. Arch., it has been observed that amongst the Primary Subjects at **Stage 2**, Study of '**Advanced Building Services**' like *HVAC, water supply and disposal, electrical, acoustical, lighting related to complex building situations like high-rise, complexes, cities* etc. are already included. This subject has been suggested by COA to consume minimum about 36 contact hours in 2 semester duration. (2 more Semesters of Stage 2 have to be dedicated to Practical Training.)

- At **Stage 2** of the course, other major premises of Urban and Regional Planning, Landscape Design, Urban Design, Disaster Management, Sustainable Architecture, Environmental studies etc. are anticipated to be proportionately covered as allied **Electives of choice**, to suit the **Institute Philosophy**. The assignments can be **structured to integrate IPSC Courses** wherever possible.

- **Thus, 144 Contact Periods at Stage 2** could be **evenly distributed** amongst Subjects of Choice **while Integrating IPSC skills Courses wherever Possible.**

It is suggested that the Institute frame to give more emphasis to the mentioned relevant subjects by choosing to offer extensive coursework in it with greater Contact Periods to accommodate Integrated Courses with IPSC. **A total of 954 additional Contact periods are available for the same.**

III. Proposal:

In the given background, and on reviewing in detail, the Course Contents of the Job Roles/ Courses Offered under ' Plumbing Consultants' Head of the IPSC Courses, the following are the course-wise proposed suggestions:

Course I: Bathroom & Kitchen Designer – Suitable to be Introduced around 3rd Semester or started along the 2nd Semester- Distributed over duration of one semester – can be offered as a mandatory Subject at Stage 1

Course II: Fire Protection Systems Design Engineer- Suitable to be introduced at 4th Semester ideally Distributed over duration of one semester- Can be offered as a Mandatory Subject at Stage 1

Course III: Public Health Systems Design Engineer – Suitable to be introduced at 5th Semester-Ideally Distributed over duration of one semester or as Allied Elective of choice at Stage 1

Course IV: Wastewater Systems Design Engineer – Suitable as Allied Elective of choice

Course V: Groundwater Engineer - Suitable as Allied Elective of choice

Note: Courses 1, 2 and 3 -Few may be consumed out of 810 contact hours @Stage 1 and Courses 4 and 5- Few may be consumed out of 144 contact hours

IV. Recommendations:

- i. It is recommended that the Certification Programs by IPSC should be considered for Re- Nomenclature to suit the architectural profession. For Instance, the Certification shall be proposed to be obtained be under the Broad Head of: "Building and Allied Services Consultant", as preferred to mere "Plumbing Consultant", that shall be more specific to the relevant field of study.

- ii. Consequently, for Specific courses, the Term 'Engineer' for instance, could be Replaced by the term 'Consultant', wherever applicable. For example, the Certification could be given under the Name of 'Fire Protection Design Consultant'.

- iii. The IPSC 'Training of Trainers' program should be availed to equip courses with robust resources, while a healthy mix of technical experts and faculty shall be structured.

V. Propositions and Conclusion:

Based on similar lines of study, Identifying similar relevant Sector skills councils under the NSDC that would help in generating skills based Architecture course curriculum is now an imposing necessity.

An overview has shown that the Construction Skill Development Council of India currently attempts to propose

'National Occupational Standards' of the Construction Industry which are presently open to Public Viewing and Suggestions. Similarly, the Furniture & Fittings Skill Council, has drafted 'National Occupational Standards' that are currently under Industry Validation. These standards are uploaded for public to share comments or observations with the respective Sector Skill Councils or National Skill Development Corporation. They also offer 'Qualification Packs' for the relevant Occupation and define that standard of Skills developed on perusing a certain course.

In this purview, if the pioneers in Architectural education were to join forces with such momentous philosophy, they would generate a cherished workforce of highly skilled Architects. Nevertheless, the effort towards making Architectural Education Skill fortified shall go a long way ahead, in producing sound and sensitized professionals in the long run.

VI. Acknowledgement

I find the academican inside me, highly indebted to Symbiosis Skills and Open University for developing an urge to begin research on making Architectural Education Skill Fortified. The active deliberations on Skilling Education, with our University Pioneers has gone a long way in fostering an ever inquisitive innovator in me, towards Teaching Learning methods backed up with such a robust philosophy.

VII. References and Useful Links:

- i. *Indian Plumbing Skills Council (Ipssc)*
[Http://Ipssc.In/Occupational_Standards.Php](http://Ipssc.In/Occupational_Standards.Php)
- ii. *Coa, Minimum Standards Of Architectural Education, 2008*
[Https://Www.Coa.Gov.In/Showfile.Php](https://Www.Coa.Gov.In/Showfile.Php)
- iii. *Coa, Minimum Standards Of Architectural Education, 1983*
[Https://Www.Coa.Gov.In/Showfile.Php](https://Www.Coa.Gov.In/Showfile.Php)
- iv. *Coa, Draft Minimum Standards Of Architectural Education, 2017* [Https://Www.Coa.Gov.In/Showfile.Php](https://Www.Coa.Gov.In/Showfile.Php)
- v. *National Skills Development Council* Www.Nsdcindia.Org