

Understanding Academicians Assessment on Architectural Education

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Abstract:- This paper proposes to demonstrate the outcomes of a survey conducted among the Faculty members of various Architecture Schools in India. We are trying to understand the experiential perspective of the teaching fraternity regarding the academic curricula and professional practice. This survey is part of the Doctoral research on the Topic “Rational of Architectural Theory in Processional Practice”.

Keywords:- Architectural Academic Curricula, Design Studio Process, Professional Practice.

I. INTRODUCTION

The Academicians across schools of India are an experienced lot with specialisations in various extended disciplines of architecture. This survey is conducted as part of doctoral research on “Rationale of Application of Theory Inputs in Architectural Practice” under the guidance of Prof. Dr. D. Vijay Kishore, Vice Chancellor, Dr.YSR Architecture and Fine arts University, Kadapa, Andhra Pradesh, India. The survey is aimed to understand their opinion formed from their experience in the professional world as well as the academic world. Country has been grouped under 5 regions namely North, South, East, West and Central for accessibility. An online Question aid survey was conducted using google forms platforms. About 155 responses were recorded across the country. There are 471 architecture schools across the nation. The population that we are addressing in this survey accounts to approximately 9500 members. Considering a 8% marginal error the required calculated sample size is 148. We have recorded 155 responses as part of the survey. Responses recorded and observations made in different aspects and dimensions are presented below.

II. RESPONSES FROM DIFFERENT REGIONS

Higher number of responses have been recorded from Southern region of India (figure1) as maximum number of architectural schools located in south Indian region as per Indian council of Architecture records. It is noticed to have an average response from other regions where as the least number of responses are recorded from the Eastern region. This trend can be supported by the fact that the number of institutions in that region are less. Responses recorded (figure1) from each region are as follows:

- Northern region -17.4%
- Southern Region – 25.2%
- Eastern region –15.5%
- Western Region –21.9%
- Central region – 20%

Which Zone of India is the Institution you are associated with, located?

155 responses

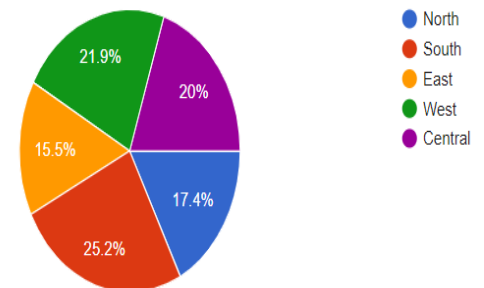


Figure 1 response from different regions of the country, Source: research question aid survey, December2019- January2020, Google Forms.

III. INVOLVEMENT OF INSTITUTIONS AND FACULTY IN IMPARTING ARCHITECTURAL EDUCATION.

There has been a sharp increase in number of architecture institutions in past Decade. This occurrence is established through various surveys and records. The number of professionals and graduates opting the teaching field has also witnessed a sharp increase. It is noticed that the responses of the survey were given by academicians who were associated with the institutions that are imparting the architectural education for more than 20 years. The percentage of these responses' accounts to (figure 2). According to recent trends many of the Veteran schools have increased the intake of students. In turn increasing the faculty employed in their institution. We can also deduce that most of the new schools have been established in period between 2005 and 2015.

How old is the institution (in Yrs)

155 responses

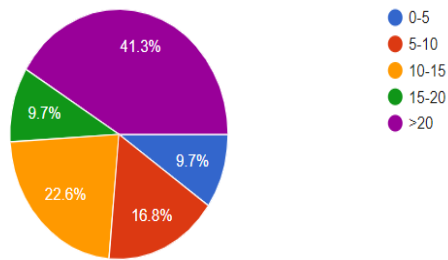


Figure 2: age of Institutions Source: research question aid survey, December2019-January2020, Google Forms.

Majority of the responses recorded are of the Assistant professor designees which accounts to about 47.7% of the recorded responses followed by a 23.2% of associate professor designee and a 18.7% of Professors. Only a 7.1% of visiting faculty responses are noticed (figure3).

You are associated with institution in what capacity?

155 responses

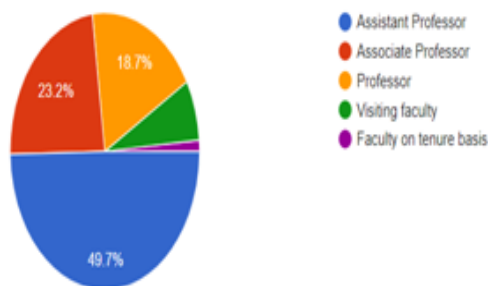


Figure 3: Designation of the faculty Source: research question aid survey, December2019-January2020, Google Forms.

There is a great relevance for both academic and professional experience. While imparting education knowledge of both worlds play an important role as architecture is both creative and technical profession. It requires preparation for real life challenges in the field. Another factor to measure the richness of the experience can be the size and scale of the projects one works on . We have tried to understand the landscape of expertise found in the architectural Institutions.

It can be deduced that there is a lot of young talent involved in teaching rather than the Veterans as we notice that majority of the responders lie in sector of 0-5 years of experience both in Academic experience and professional practice (figure 4 and figure 5). This statement can also be supported by the result that about 49.7% of responders are Assistant Professor designees.

State your academic experience (in Yrs).

155 responses

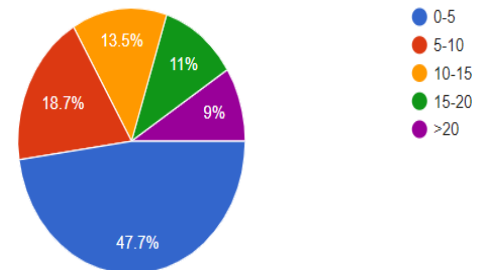


Figure 4: Academic experience in Years Source: research question aid survey, December2019-January2020, Google Forms.

State your experience in professional practice (in Yrs).

155 responses

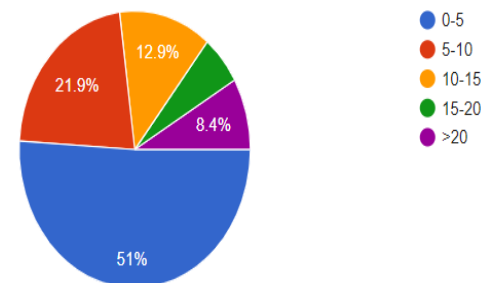


Figure 5: Experience in professional Practice (in years) Source: research question aid survey, December2019-January2020, Google Forms.

Minor percentage of veterans are found with 15 years’ experience or more in both the divisions (figure4 and figure 5). This trend can also be understood from the theory that there were a smaller number of architects produced before time span of 20 years in comparison to the number of graduates a decade back. Steep rise in the architectural institutions in recent times created an imbalance in the demand and supply cycle.

Projects designed/constructed by you (built up area in Sq.Ft).

155 responses

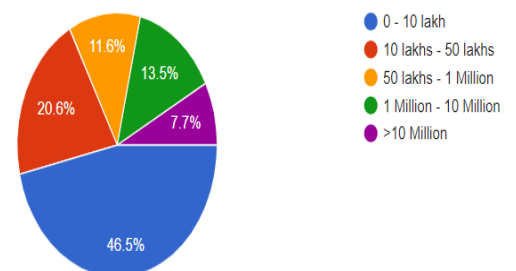


Figure 6: area designed or constructed as part of their professional practice Source: research question aid survey, December2019-January2020, Google Forms.

Most of them are found to have an experience of working on scale of projects that range between 0-10Lakh sft of built-up area bracket (figure 6). Minor percentage of professionals in academia have an impeccable practice experience with projects scaling to Greater than 10Million Sq.Ft in area (figure6). Probable reason for this phenomenon can be that legends and well-established professional in practice have very little time to spend in teaching and guiding students owing to their demanding schedules.

Enthusiastic, experimental, technology-oriented, futuristic approach from the youngsters coupled with ethics, caution, knowledge, practical and rich experience of the veterans form a perfect combination for learning environment. This balance is found to be disrupted in the past 15years.This trend is found to be rebalancing itself various other learning factors such as skill development workshops, guest lectures etc... these platforms enable timely interaction between the young successors, Veterans, legends, and the upcoming talents of the field.

IV. VARIED EXPERTISE OF THE FACULTY MEMBERS

a) Post-Graduation

Demand for postgraduation has been found to be increasing over the span of 15-20 years. Earlier, architects preferred continuing in practice in comparison to pursuing a Post-graduation. With the extension in the periphery of the architectural subject into many other specialized disciplines, guidance from the subject experts becomes mandatory. This determined the growth for post-graduation in other integrated fields rather than the core subject.

Out of 155 responses we notice only 133 responses to be opting for postgraduation. (figure 7). Majority of the teaching professionals are found to be specialized in the subject of Planning. (36.1%) (figure 7). The next popular choice was master’s in architecture with 25.6% of people choosing it. 20.3% people opted for other subjects. These subjects include urban design, landscape architecture, conservation studies, digital architecture etc. construction management, environmental/sustainable studies are on a lower side. Current trends and choices noted among the students suggest that the demand for environmental/sustainable studies and other subjects are increasing. Probable reason for this shift could be due to emergence of new fields and opportunities over the time.

Are you a Postgraduate?If yes,What is Your Field of Specialization?

133 responses

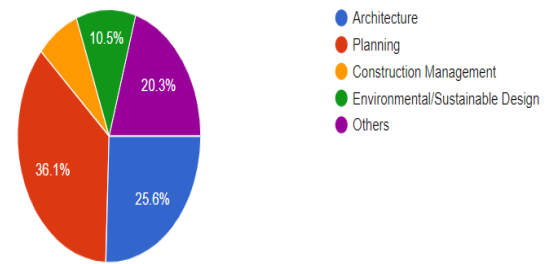


Figure 7: Specialization in Post-graduation
 Source: research question aid survey, December2019- January2020, Google Forms.

a) Research and writing

Any field has scope for research and innovation. Experience with research and writing open new avenues. This also paves way for concrete solutions to identified problems as there would be thorough research and understanding of various facets of the problem. Research and writing seem to be a very minimally chosen direction as about a major 45.8% of them seem to have authored/coauthored a range of 1-4. Secondly about a 27.7% of the population seem to show minimal interest in this direction as they have not recorded any publications (figure 8). Very less percentage is noted to have attempted to write more than 12 papers. This requires attention and improvement as experts of a field have great potential to identify, research and find solutions for the current problems. They can also inspire and motivate the young talent in this direction.

State the Number of research papers you have Authored/Co-Authored.

155 responses

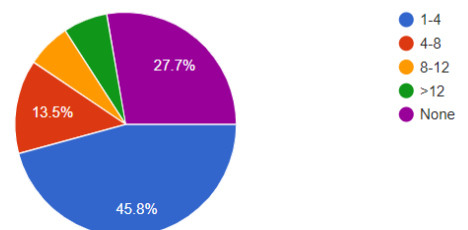


Figure 8: research papers written by the professional’s
 source: research question aid survey, December2019- January2020, google forms.

c)Workshops and Conferences

Workshops/conferences help an individual or an organization in skill development and subject enhancement. It is important for the experienced professionals/academicians to organize and attend various workshops. Attending these skill development activities is found to be a common phenomenon as it is found that almost everyone has participated in about 1-12 of them. About a 34.8% of them have attended more than 12 of them. (figure 9). The figure of 52.3% of them not being part of any workshop/conference organizing committee suggests that opportunities for conducting these workshops are less

(figure 10). Moreover, we also deduce that probably the maximum evolving teaching force seem have experience ranging anywhere between 0-5 years (figure 3,4,5) have little opportunity to organize and more opportunities to enhance their knowledge, skill sets.

State the number of workshops/conferences that you have attended.

155 responses

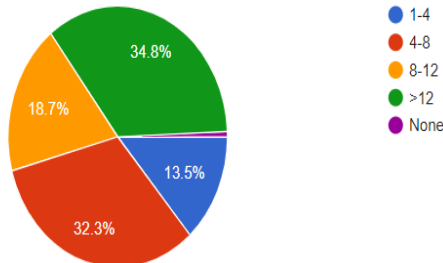


Figure 9: workshops/conferences attended
 source: research question aid survey, December2019-January2020, google forms.

State the number of Workshops/ Conferences that you have organised.

155 responses

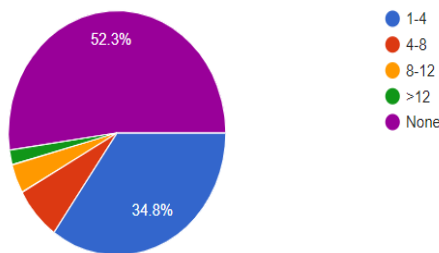


Figure 10: workshops/conferences organized
 source: research question aid survey, December2019-January2020, google forms.

V. ASPECTS THAT REQUIRE EMPHASIS IN THE CURRICULA

Advanced technology and construction techniques, environmental/sustainable design, research methodology, Socio-economic and financial aspects, digital architecture form a very important supporting dimensions of building design process. Strong knowledge in these directions helps an architect in designing an integrated solution that eases the implementation as well as increases accuracy of the solution. There was always an expression from different stakeholders of the field that these aspects lack emphasis in the learning stages. According to the teaching fraternity major choice (29%) is made in the direction of Socio-economic and financial aspects of building design followed by requirement for prominence in sustainable/environmental aspects (28.4%). Third major weightage is given to teaching advanced technology and construction techniques(23.2%)(figure 11). Very few feel a need for prominence to digital architecture and research activity. A contrasting behavior is found in this regard as a rapidly increasing demand for digital architecture skills including

Building information Modelling is noticed in todays scenario. There is still a lag in between the digital skill set acquired by the students and the actual demand for digital skill set in the global market.

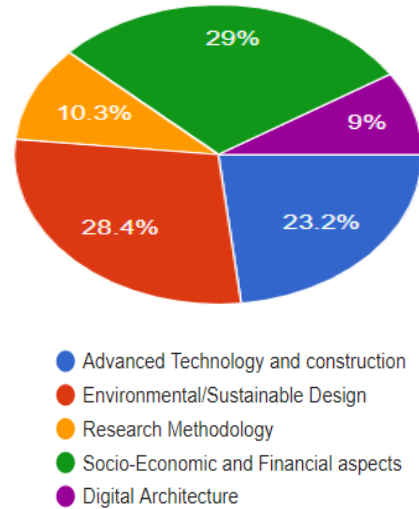


Figure 11: Aspects that require emphasis in the curricula;
 Source: research question aid survey, December2019-January2020, google forms.

VI. DIGITAL SKILLS IN ARCHITECTURE

Building information modelling is gaining great relevance and prominence in the global market. Number of new opportunities have been created for architects in this direction. World is moving in the direction of virtual reality and accuracy of the construction process and requirements. This created an inevitable need to master required softwares for design process. But it is also very true that the concepts for creative solutions are best obtained with manual design process. This encourages a balance between the manual drafting skill sets and computerised skill sets.

Software that you use often are:- (multiple answers)

155 responses

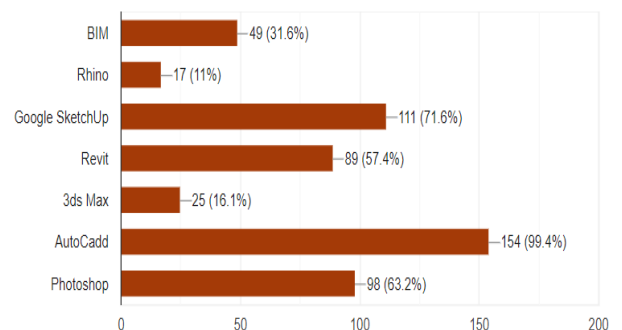


Figure 12 Most often used Software's
 source: research question aid survey, December2019-January2020, google forms.

Autocadd,photoshop,google sketchup, Rhino,3ds max,revit and other building information modeling tools are the current softwares used in the global field. Out of which Autocadd, Revit along with various other building information modeling management softwares have high prominence international market. Survey shows that most commonly used software among the teaching staff is Autocadd(99.4%) followed by googlesketchup(71.6%) and thirdly Revit(57.4%). Increased use of Revit aligns well with the global trends but BIM has less usage with about only 31.6% of them using it (figure 12). A teacher with strong software skills can pave an smooth path for students in this direction.

VII. LEARNING PROCESS FOR DESIGN

There are different learning methods such as Creative thinking, experiential learning; learning using digital technology and virtual design pedagogy; critical enquiry and empirical making in studio; process-oriented design pedagogy from theorization to implementation. Out of this major preference is given for process-oriented design pedagogy with 29% of them opting for this method. Next prominent choice is found to be critical enquiry and empirical making in studio with 27.1% of them making this choice. Next in line is creative thinking and experiential learning process with 26.5% opting this method. Lastly learning through digital technology and virtual design pedagogy is followed by 17.4% people (figure 13). Design process is not a rigid learning process, different methods of learning prove effective in different stages with different people and environment.it also depends on the complexities of the project and accuracy required. Results seem to all align well with this thought process.

In Your Opinion which process of learning is apt for Design?

155 responses

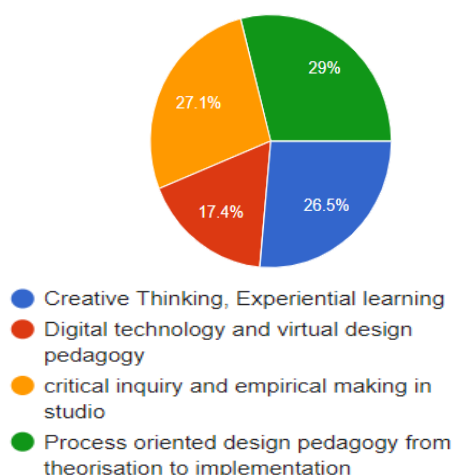


Figure 13: Different methods of learning
 Source: research question aid survey, December2019- January2020, google forms.

VIII. PROFESSIONAL LISENCING

There are different requirements in obtaining a professional license that are followed in different countries and professional bodies across the world. India is governed by the rules and regulations of Council of Architecture. The council follows a procedure of obtaining license to practice after completion of the graduate degree and registering with the council; But there are many countries which follow more rigid process in comparison to the process we follow. There has also been a discussion on many occasions regarding the change for the license process among the fraternity. It was suggested with a aim of holding more cautious process to ensure quality and greater competency. Major suggestions were made to issue license after efficiently completing a specific experience period after graduation under an already established architect. Second most discussed format was issuing license based on graduate degree and passing the qualifying exam conducted by the council.

Survey results demonstrate the above specified discussions as we find a clear majority opting for the format with graduate degree with experience (44.5%) followed by the format of graduate degree and qualifying exam (36.8%) (figure 14). Very less number are happy with the current procedure which is indicated with a 14.2% of people making the choice in this direction.

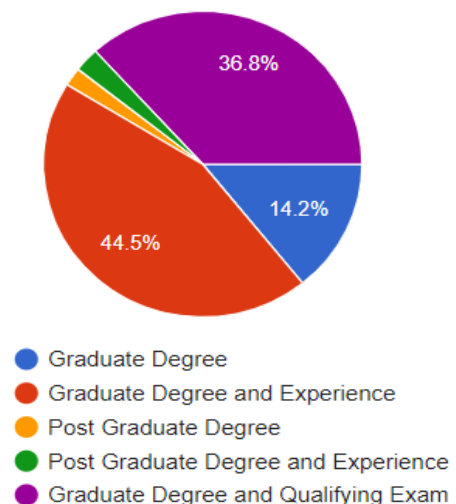


Figure 14 Ideal process of obtaining license
 Source: research question aid survey, December2019- January2020, google forms.

IX. ARCHITECT'S IDEOLOGY

What is your basic ideology as an Architect?

155 responses

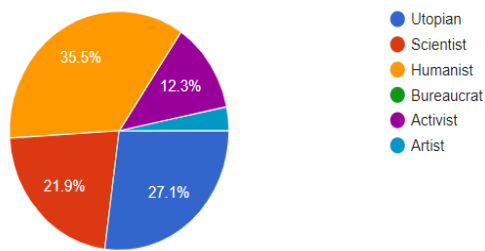


Figure 15 Basic ideology of an Architect

Source: research question aid survey, December2019- January2020, google forms.

Every Architect has an ideology that influences his design process and solutions. It has always been perceived by various other stakeholders of the construction field that architects work with an artist approach or ideology. Whereas the survey results show a contrasting result with Humanist (35.5%), Utopian (27.1%), scientist approach (21.9%) to be the major ideologies adapted. These are followed by the activist approach with 12.3% of them following it. Artist approach is next to negligible. This shows a clear phenomenon of architects emerging as centers of technology combined with creativity and emotional intelligence rather than aesthetic designers.

X. INFERENCE

- There is a necessity for the experts and veterans to step into teaching process and participate more actively to direct the enthusiastic and futuristic approach of the young faculty towards major efficiency goals. Their real time practice experience combined with explorative and bold young talent creates a balance and completes the learning process for a student. Knowledge, efficiency, and quality guidance from the teachers reflect in the personality and capabilities of the graduates. It is very important to safeguard this spectacle.
- Research and writing need more encouragement and motivation as we find minimal interest in this direction.
- Socio-economic aspects, sustainable/environmental aspects, advanced technology, and construction techniques require more emphasis in teaching curricula to enable a smooth transition of a student into professional world.
- Mastering the Digital skills have become very important for an architect to keep up with the global evolutions. Though many of the faculty members are well updated with software's there is still a need to increase software knowledge in certain specific software domains for instance software's of building information modelling management requires more exposure and exploration.
- Major change is suggested in the license procedure as majority of the academicians express an unsatisfactory opinion on the current process as majority opt for either the graduate degree with experience as a prerequisite or

graduate degree with passing score in qualifying exam as prerequisite.

ACKNOWLEDGEMENTS

1. **Sruthi Reddy C** – Assistant Professor- School of Planning and Architecture, JNA&FAU, Hyderabad, India.
2. **Research and Development Cell** - School of Planning and Architecture, JNA&FAU, Hyderabad, India.

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