WRAP UP SESSION

Human-Centered Architectural Education In The Contemporary Complexities In Asia

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The world of architecture in the global era, like many other field studies on professions, is facing enormous challenges, which at least come from two sources. First, its "old" theories which were put a requiem back in the 1970s are challenged by vast changes in today's world, in which technology and media responsible. Meaning of space and place, for example, need to be re-configure as time is moving not in linear way and not become the only constructor of nowadays world. Second, media and technology also tremendously shakes the legitimation of architects in their role of producing space, as they are also facing ethical-professional values to be constantly in confront. What Pinterest, Instagram and many other social media are pleasing consumers with visuals and narratives of imagined space, have resulted to the disturbance in the process of being architecture and becoming architects. Big Data and the Internet of Things currently direct of our understanding of the world and soon govern many aspect of our lifes. Although the world is running in dispersed directions, we, the academics, goalie in the knowledge of architecture production, the prerequisite to adapt to this interrupted changes.

Interconnectedness very much characterize contemporary situations. For millenia, the great land mass of mainland Asia as well as the vast oceans of its archipelagic regions have been the region to cultivate great interconnectivity and diversity producing enormous multi-culturalism. Currently, however, global movements and real time communications are accellerated in unprecedented speed. The ability of Asia to embrace and nurture diversity is challenged due to this extreme pace.

Architecture, as we know it, are experiencing fundamental changes. On the one hand, architecture is urged to deal with the increasing complexity and accelleration of changes by being adaptive, inclusive and progressive. On the other hand, architecture has to return to humanity being the fundamental values to uphold. Such situation is highlighted by a Pritzker laureate architect, Rem Koolhas in an interview, ". . . stands with one leg in a world that's 3,000 years old and another leg in the 21st century, . . .This almost ballet-like stretch makes our profession surprisingly deep."

Being the largest archipelago in the world, Indonesia develop heavily in the desire to improve with the high notion on the *Aufklarung* as architecture also follows, the pursuit on the fathom is reckoned to the product of knowledge, rather than steeped the process of producing knowledge. This situation shall not blame. However, there is also an urgency to move beyond merely continuously confirming "truth". A context of the study, whether it is a setting, methods, tools, or variations of participants, anything else is needed to be re-translated into a manner of broadening or knowledge. It supposes to be not hard, as our setting, the world of architecture in Indonesia is in the contestation between going into the future and holding up to the pasts, engaging inclusiveness or staying in exclusiveness, as well as going large and global or going small and local.

The conference, entitled, "Re-charting the knowledge of architecture", is aimed to pursuit of architectural knowledge in the position of global arena. As it took venue on Indonesia, the conference cannot be away from the dynamic inquires of decentring and diversifying of the architecture of local versus global. A day conference with a great numbers of participants, is prepared and carried out in a very limited time elucidate many aspects of the main theme. Prof. Junsuk Lee underlines the way we should manage the education of architects in a holistic way. The complexity of culture and some insightful ways of dealing with it are well stated by Prof. Johannes Widodo. Prof. Marcus Hackel presents the importance of first hand experience as an excellent way to enhance the ability of the students to deal with multi-culturalism; while Prof. Ibrahim Numan emphasizes on the ramification of socio-political context in the formulation of knowledge and method of education in architecture. Prof Yandi A. Yatmo provides a framework to understand the renewal of theories, methods and design practices. Dr. Ilya Maharika challenges the most fundamental notion on the transformation of the word "architecture" questioning the ontological basis of the field.

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Presentations are arranged into a number of topics, namely:

1. Humanity and its Challenges, questioning the fundamental how architecture serving and being interrelated with humanity in challenging situations
2. Multitude of Cultural Complexity, investigating how architecture deals with the increasing complexity of culture
3. Uncertainty of Urbanism and Territoriality, thorougly discussing the fading the physical, social, and knowledge boundaries between architecture, urbanism and territoriality
4. Digital Reality and Digital Technology, trying to understand the based advencement of digital technology to affect life and architecture
5. Environmentally Appropriate Technology, reconsidering the ways to incoporate technoloy to create sustainable environment in the whole sense.

As many excellent presenters discuss those topics, I would like to take the liberty to propose different ways to wrap up by proposing a frame on the need of education, as follows:

1. Reconsidering Paradigm
   As architecture is one of the human-centered field study, while the world dramatically changing, a need for re-inventing architecture with considering dynamic of the interconnectedness of spatial fluidity and temporary arrangement is valuable to push a bit further our perception and definition about the study. We must not, however, drawn in the ocean of texts and information in the global age, and thus repositioning our architecture is a must in an attempt to put encounter of the wisdom of the past and promising future, of micro and macro scales. Architecture should be the meeting ground between variety of social and economic forces, between permanence and impermanence, between past, present and future; while deeply rooted in the humanity.
2. Reconfiguration of the Theory
   As architecture always signified genius loci rich with stories, backgrounds, and context of humans, the theory of architecture should not be seen, and never be an independent theory. As we must not forget this, production of knowledge in architecture should address the multi-level and multi-aspects interrelations. Thus, whatever research approaches we will use from technology to ecology, by positioning urbanism as a phenomenon, context, or setting may draw patterns of habitation which might be intervened with architectural design, and eventually leads to a new realm of knowledge.
3. Reformulation of Method
   As a process is important in the knowledge production; methods to do research and design suppose to expand knowledge and ability to deal with complexity. On the other hand, our students as actors in the global age potentially perceive architecture, space, and time quite differently. Thus methods to engage with them in various learning process will larger benefit, as same as to employ digital devices in dealing with variety of themes and interrelationship in the architectural world.

Humanity and its Challenges, questioning the fundamental how architecture serving and being interrelated with humanity in challenging situations

Community involvement on spatial issues is important to be considered and studied. People in Indonesia have an important role in shaping space even in an informal process that grows naturally in the midst of society. The process can be drawn to be part of a more formal design process which during this design process tends to focus on the architect. The patterns of informal space growth usually coincide with formal spaces that are interconnected with one another. As in the study of the growing relationship of informal patterns around the campus. The morphology, visual, and function dimensions around the campus are determined by social and temporal perceptions.

More broadly, the role of the community can also informally determine the formation of spatial patterns, as happened on the island of Karanrang. The spatial pattern in Karanrang is determined by the actors of activity, occupancy, territory that make up unique typology based on activity, child, mother, father, and combination of the three. Without comprehensive community involvement, a design engineering will function less than optimal.

The studies that have been conducted in the Cihapit traditional market of Bandung trying to include creative activities in the show that the existence of events and creative artifacts can indeed improve the physical image, but it does not give an economic share for the market. This is because the impetus of traditional market economic activity is stronger and requires more space. As one example is done in Kampung Kota Surakarta involving government and stakeholder to create public space for the child. The key point, the more varied the participants involved, the better the results will be. This understanding needs to be initiated in the education process for students.

The concept of co-design that is taught to students as a method of designing can introduce students to the society or community. The challenge is that this process needs to be done in a longer time. There are at least three stages to do is to determine the NOC (Number Of Clients), then determine the LOIC (Length of Initial Contact), and LOCE (Length of Community Engagement). The LOIC shorter may lead to the longer LOCE. The pattern of social space in Karanrang island shaped by a) Children activity, b) Father activity, c) Mother activity, and d) Combined activity.

Co-design is not something new but practicing it in academic setting is dificult because of time limitation. To understand informality we need to see not only physical aspect but also perceptual dimension and temporal dimension. When we face the uncertanity in informal space we need to unveil and unravel. Creative movement in traditional market only good for media but

not improve the market economically. In participatory design , it is necessary to include various participator.

Multitude of Cultural Complexity, investigating how architecture deals with the increasing complexity of culture

There are three models in architecture studio learning: internship, supervised and simulation design studio who depends on supervised, senior architect and student disciplinary. Only internship and supervised studio are recommended for learning process to achieve the architect competence in professional program of architect. For bachelor program, problem based learning is important method in architecture pedagogy to have 3 important basic skills: complex problem solving, critical thinking and creativity. If this method could be combine to lecturer's responsible in three pillars of higher education, it would be a great potential to develop both students and lecturer's skill in development of architecture education.

To focus the cultural studies in architecture design studio, there are some design principles that delivered from traditional value, i.e. Sulappa Eppa concept from Bugis traditional community, the concept of Gowa traditional house which converted in the brick producers houses and the preservation of Islamic value that still use in Arabian community in Pekalongan and how the historical city still use their old spirit which transferred to the modern city concept but never loss its form and identity.

Cultural aspect should be transformed by its value, the spirit of space, basic fundamental, behaviour and habit of the community and the most important thing is the authenticity of its tradition of life. We should change our mind to not only see and transferred the form of traditional architecture but we should consider those aspects. All the architecture students have to be aware about how the cultural will be influence their design precisely if they could be use the tradition and the aspects.

Syam, et all find the concept of territory of social space in the context of the interaction of two ethnic Bajo tribe and Bugis tribe in the form of settlement, as we seen at kampung bajo, Sulawesi. Territory formed in Bajo settlement is inseparable from historical values, natural environment condition, sea as main orientation and privacy demand in the form of motivation of economic interest. Territory categories that have been unique to the uniqueness, social aspects and similarities of marine and economic cultural backgrounds can foster a strong sense of kinship, thus eliminating the boundaries of space and time in their daily interactions and activities.

Sari, et all. find the main elements of historical objects and examine their relationship with local communities and tourists perception. The research provide of place attachment towards all mainly historical objects as "spirits" of cultural heritage for people to gather and interact. The research indicates the significance of the tangible heritage and intangible heritage attachment in shaping the heritage city. Cultural heritage is a great asset and a proud to be preserved. The main elements of historical objects become of identity the city because of its has architectural style and historical background. As we seen in Malioboro, Yogyakarta.

Panjaitan,et all. suggest that The development of the area for tourism purposes should have good sensitivity related to the product to consumption aspects, where the interaction between the local community is seen as the supply (insider) produce the products, which can then be consumed by the visitor as demand (outsider).

Warakanyaka, et all. argue that the presence of time is a crucial aspect in the progression of the interior architectural education. The interior discipline that focuses on the aesthetic and constructional aspects, curently also about aspects of sociocultural conditions to enhance the wellbeing of its inhabitant. They also argue how the presence of time might affect, transform and even generate context-specific interior architectural design methods that enables several dynamic forms of inhabitation.

Harahap, et all discuss how *reading* is central to the architectural practice and how it carries an immense potential for architectural design method. It argues that an act of *reading* is important to be introduced and learned in the architectural education institution within which students learn and develop various design methods.

Siregar, et all. have studied focused on locating the genius loci of Medan City through tracing the historical meaning by adapting the method undertaken by Norberg-Schultz in tracing the spirit of place and genius loci. Finding fo this research is about the role of culture and economic background that plays a major role in the formation of the character of Medan City center. The city is formed from the history of the plantation industry as well as the diverse cultures that share the same attachment and goals in the economic field.

Some important points how architecture deals with the complexity of culture:

1. Cultural/ historical and economic background become the main influenced factor for the form of settlement or city.
2. Social culture, technology and legal standing is essential factor, how to conserve the historical architecture.
3. The presence of time is crutial aspect in the progression of the interior architectural education.
4. Reading as an approach of design culture method.

Digital Reality and Digital Technology, trying to understand the based advancement of digital technology to affect life and architecture

Three main themes are presented on the digital technology papers, which are : a) The theoritical approach of layered relation between digital technology and architecture design (Johanes et al) b) The practice and implementation of the digital technology such as parametric based design and Virtual reality tools within architecture educational and design for specific

purposes, cases and context (Al Athas, Gunagama, Pamungkas et al) c) Examining the implementation of the digital technology within the architecture discourse (Indraprastha).

Johannes et al find digital realms layers are then layered into materialization, simulation, translation and generation , which then can be conceived in essential roles of two form of the development of the architectural education curricula: the layers of the medium which allow us to work in surpass the interface and work more tactically by understand its operating language, and the layers of methods which bridging the fundamental knowledge of digital medium with the more practical architectural design processes.

M Galieh finds Evolutionary Solver in the Galapagos could reach capabilities the dynamics of the algorithm process that was arranged for the acceleration of alternative design creations. Although the simulation is only able to propose an alternative approaching the ideal design conditions, due to the extent of the ideal definition and the difficulty of converting it into the mathematical notion, the simulation results show that each different initial condition yields a different design alternative.

Syarifah establishes a give-and-take relationship between top- down formal emphasis and a bottom-up material influence through intriguing case study of parametric design of Gridshell structures.

Pamungkas et al, suggest that design cognition as the essence of learning in the architectural design needs to be approached by the spatial experience honed by three-dimensional thinking from the medium diversity. By using Virtual Reality tools, they find VR simulation has a good impact on a spatial experience of office building design for 2nd-year architecture students by simulating good quality of visual and lighting, as well as brings up the ability to feel the scale of space.

Indraprastha suggests that rather than only providing them a set of computer skills for production and presentation techniques, the challenging issue mainly is to teach computational thinking at undergraduate level of the design. The computational-based course for undergraduate program needs to focuses on the know-how aspect of pedagogy, which focuses on to know how to use, and how to solve a certain problem using some set of tools or algorithms.

The based advancement of digital technology to affect life and architecture:

1. How to find pedadogical teaching method/approach to closing the gap between formal ways of using software vs informal and creative ways of design process.
2. Importance to know how to use, into how to understand the language and anatomy of the software
3. The dynamic in architecture education allow teacher to explore various approach in developing architecture student analytical skill of environmentally friendly design approach. Some utilise creative method whilst other employ computer based simulation. One of the example of creative approach is the use of Ecology to be utilised to learn about sustainability through a quantitative approach to achieve an efficient and environmental friendly problem solving. The idea of ecology as a study on interrelated systems could be transformed into an analytical tool that could reveal complex systems and issues. Its nature of having complexity and dynamicity makes ecology a complete analytical tool that could lead to a deep understanding through an explorative process as well as spatial understanding.
4. Another example of creative approach is Biophilic Design Method. It is an approach to architectural design to consider design elements (or human) as of a living biological organism with its mind-body systems indicator of health, productivity, and wellbeing. This method syntesizes the utilization of various factors i.e. resources both natural and man made with the human receptance and its implication of i.e. health, social, economy and well being.
5. The computer simulation and technology has evolved and result in the variety of approach and method in measuring variables in building planning and design. Each method has its own strengths and weaknesses as they are being developed using variables and elements that are unique to its origin, context and formula. Architect and both student and teacher should have a basic knowledge of various method to be able to justify which method is best suit their case of study and design.
6. Software technology allows architect and researcher to gather various information from climate to surrounding context, and other necessary design variables to perform and simulate building model to be able to both create and evaluate the most efficient building design. The use of natural resources for building materials as well as comfort generator has been an important aspect in achieving sustainable and energy efficient building. In a more specific example, the use of software through computational simulation may even help to identify and reveal the response of traditional architecture in Bangsal Srimanganti of Kraton Yogyakarta to acoustical aspect of Gamelan music. In other case, it may be utilise to study and evaluate a structural firmness of a construction against endangering disaster i.e. earthquake.
7. Daylighting calculation method, how relation of context affect the calculation result. New find. Challenges in implementing the ecology approach and strategies. Any other example of project using ecological approach? Creative trigger is important as a vessel to bring the process into intended goal. Architecture has evolved and so should the approach of teacher in delivering knowledge and insights to the students. Various creative ways such as biophilic and ecology as analytical tools is an example as well as the use of software technology and on site live observation. Those approaches should enrich the education system in preparing students as both a critical unique mind body system and part of a more complex and larger network of minds.

Environmentally Appropriate Technology, reconsidering the ways to incoporate technoloy to create sustainable environment in the whole sense.

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Uncertainty of Urbanism and Territoriality, througly discussing the fading the physical, social, and knowledge boundaries between architecture, urbanism and territoriality

Continually and contextually changes. Thus, changes in *habitus* might open a creative cross-cut in reproducing knowledge about perspective of space. In a very least for example, changes in behavior in inhabiting space, such as from inhabiting water to land (Rosidin; Prayitno), from landed houses to high-rises (Ridwana; Adiyanti), from studio to real urban setting (Widodo and Atmodiwirjo), provides “facts” needed for architecture aims. Concerning on “facts” however, at some point might give undercurrent negative note on the knowledge reproductions.

However, as knowledge production needs to because of it is urbanism, a deep consideration in understanding contesting *field* invites even more engagement in human-related field of studies. Thus, narrative inquiry, ethnography, history, and many methods in revealing counter grand-narratives, are potential to be used as creative approaches in better understanding of now-world, as well as leading to re-chart our position, as source-full field, in the global knowledge world.