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Predicting Revolutionary Pedagogic Practices from Architectural Design Studio Culture Habitus of the Selected Nigerian Universities

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Abstract

Encapsulated within the envelope of the architectural studio are the design studio culture activities and attitudinal patterns exhibited in the nuclei of the learning environment of architecture schools. The connecting thread between architectural revolutionary pedagogic practices and studio Culture is still tied in most architecture schools. Evidently, up till now, little or no empirical documentation has been done in line with predictors of revolutionary pedagogical practices in schools. This study investigated the design studio culture as a predictor of revolutionary pedagogic practices to demystify the myths and complexities enshrined around the studio habitus. The methodology engaged a survey design strategy; the primary data were collected using observations, oral-focussed group interviews, and questionnaires. At the same time, the secondary data was collected from the archives, government reports, records and literature. Also, the design studios, students and teachers were used as the sampling frame. The unit of analysis was from 300,400 or 500; and M. Sc1 and M.Sc2 Classes; inclusive of design studios Teachers, Mentors and Instructors. A purposive sampling technique was adopted at multi-stage stratified levels. SPSS was used as analytic apparatus to analyse Responses from the Teachers and Students, while content analysis was used to evaluate the interviews and observations. The findings showed that the most significant predictor of Revolutionary Pedagogic Practices was studio Culture Spectrum in three (3) hierarchical orders: (i) the Demystification of studio culture, (ii) Motivational Factors and (iii) Studio Culture ethics and Code of conduct. This study established that the different Revolutionary Pedagogic studio practices employed in the four selected schools operated in different Orders of Studio Culture. We recommend that the stakeholders review the studio programmes and demystify the studio culture. This is to motivate the students with the repackaging of ethical code of conduct and guidelines and integrate a Culture-Oriented Revolutionary curriculum needed for competency rating and high-stake achievements certification in the life-long professional work ethics in Nigeria and other Nations of the World.

Key Words: Pedagogic, Practices, Predictors, Revolutionary, Studio-Culture

Introduction

Studio Culture as a Predictor of Revolutionary Pedagogic Practices appeared seemingly complex, just like the phenomenal concept of "creativity". In the myriads of contents and contextual meanings. Both entities are epistemologically enshrined around architecture's formal educational training and professional practice and other related creative educational studies. It is cumbersome to give a

precise definition of 'Culture' in today's educational landscape because of its multiple definitions (Davies et al., 2014). In this guise, it has a greater tendency to be viewed less individualistically in more collectivist societies. The peculiar nature of complexity opened creativity doors to the context of traditionalism, conceptualization, learning and practice, appropriateness and acceptance of creativity and culture in the environment (Niu & Sternberg, 2006). Such an environment is where education and Culture are integrated into Architectural learning, training and practices as multidimensional Culture (Williams, Ostwald & Haugen, 2010). In general, Culture means "the beliefs and attitudes about something that people in a particular group or organization share" (OALD, 2015). And in sociological perspectives, Culture also signified the totality of what is socially learned, transmitted customs, acquired knowledge, material objects productions, and attitudinal behaviours. It also includes the artefacts, values, ideas and dynamics of people (Schaefer, 2006; 2018) in the world's societies. In this investigation, attention would be drawn to phenomenal *Culture* in terms of dominant ideological beliefs in the architectural design studio. These beliefs and practices would help maintain a camaraderie of a powerful socio-economic-political interest (Schaefer, 2006; 2018) in the design studio habitus of Architecture schools in Nigerian schools and other parts of the world.

Lucidly, design activities in these domains are generally encapsulated in the habitus concept of "*Studio Culture*" as habitus connotes the spatial-sensual assimilation of other users' personal space and considerable neighbourhood spaces. Culture is philosophized as the totality of conglomerate experiences, habits, and patterns in architectural design studio spaces. Studio culture synthesized the entirety of undoubtedly vivid memories that characterize all the design studio experiences in architecture schools. In the captured communique of the American Institute of Architects', Studio Culture essence is described as:

> *Late nights, exciting projects, extreme dedication, lasting Friendships, long hours, punishing critiques, unpredictable events, a sense of community, and personal sacrifice all come to mind. Those aspects are not usually written into the curriculum or even the design assignments, but they are likely the most memorable and influential. The experiences, habits, and patterns found within the architecture design studio makes up what we have termed "studio culture"* (AIAS, 2008; 2018)

The revolutionary pedagogic Studio Culture is enshrined around the large dynamic, flexible habitus space with anthropometrically defined individual workspace, group clusters and defensible neighbourhood spaces. This habitus is also operated in one-on-one and table to table didactic-teaching by the professors, instructors, mentors and jurors of these

schools. In most parts of the world, Schools of Architecture maximally the studio Culture as both traditional and virtual studio spaces; with integrated auxiliary functions like modelling material shops, data (study) rooms, digital labs, gallery and exhibition spaces (AIAS, 2008; 2018). In architecture schools, students and faculty alike must understand and share fundamental studio core values of *optimism, Respect, Sharing* E*ngagement, Innovation* as Parametric indices of an ideal Studio Culture (AIAS, 2008; 2018).

This research is premised around the vehement criticism and complaints about the studio culture '*myths'* and its predictive effects on the Culture of learning and practice in architectural design studio spaces. Since the origination of architectural design studio culture, there has been little or no empirical documentation regarding predictors of pedagogical approaches in terms of design studio culture in the learning environment. This investigation examined the *studio culture* as a predictor of revolutionary pedagogy practices; in a bid to improve the academic achievements of architecture students in Nigeria other parts of the world.

Literature Review

Origin of Studio Culture

The background focus of this study is premised on the stakeholders' advancement for best practices and how this had evolved some revolutionary practices as a reaction to the criticism against traditional practices: in terms of pedagogy, culture and environment. This study characterised the architectural design studio pedagogy in terms of studio culture-environment. Before the inception of any project, the design studio tutors must organize the students, conceive a brief, earmark the target goals and expectations, design a schematic educational process, and define parameters for the project assessment. The sociological order of the design studio demands that tutor(s) meet students, either individually or in groups, to demystify the myths in the brief and put in place the necessary instructional strategies as applicable to each stage of the projects. Despite the acculturated rapport between the teachers and students and students and students, there is bound to be frictions, conflicts, misunderstandings and miscommunications regarding design ideas between students and tutors and amongst tutors themselves. These activities comprehend the complexity and mystifications of the architectural design studio culture within the learning environment.

Ethical Rules and Studio Culture Activities

Since an architectural design studio is work, learning and teaching space, it is therefore expected of the stakeholders to advance a culture of respect so that the work of others is not disrupted within and without the studio hours. Also, disturbances such as excessive noise through music should be guided by personal entertainment devices, i.e. headphones, computer gaming, and the likes. Unethical (Unacceptable) behaviours like displaying pornographic or offensive images

and the use of drugs and alcohol are prohibited in the studio spaces.

Problems associated with Studio Culture Activities

The studio Culture is the guardian of all design activities in most architecture schools to some reasonable degree. For an architect, either in training or practice, studio culture is symbolized in the way of life, language, attitudes, altruism, dedication, engagement and commitment. It also includes all exhilarating explorations, a crescendo and ecstasy exhibited among the camaraderie of studio students. Within these activities of interests, there exist differences in learners' beliefs, attitudinal and behavioural dispositions, peers' influences, studio rules and policies and environment within the studio culture. Beyond the distractions being caused due to disturbances via excessive noise, several other factors attributed to '*deserted studio'* (Aderonmu, 2013). Some other students struggle with time management and organization issues: some learners have a form of hindrance classified as hyperactivity and attention disorders-attention-deficit hyperactivity disorder-ADHD (Woolfolk, 2007). This type of hindrance can be further categorized into three (3) classifications, namely: (i) problems with attention, (ii) problems with impulse control and Hyperactivity.

Attitudinal Problems Associated with Design Studio Cultural Habitus:

Problems with Attention

A higher attention span is needed for greater achievements, stake grades, and studio activities, from schematic to working drawings. But many students commit careless blunders in their drawings at this stage; the students in this category may not pay adequate attention to details, specifications and precisions required in architectural productions. When given a particular individual or group task, such students have great trouble keeping deadlines or lifelines assignments and activities. Students in this category seem not to listen when a Tutor, studio mentor or coordinator is given out Tenets of instructions to the studio class. Attention problems among design studio students also lead to the inability to follow through on instructions and unfinished projects (Woolfolk, 2007).

Problems with impulse control and Hyperactivity in the Studio

Drawing lessons from the "No Child Left behind Act of 2002" (Michael, 2018; Olukanni et al., 2014) in the American educational system, students with exceptional attitudinal dispositions like impulse control, hyperactivity and other abnormal problems need to be given adequately special attentions. The role of a Teacher in the Cultural Habitus of design studio goes beyond regular one-on-one, table-to-table pedagogical mentoring. It has to do with adjusting instructional guides where the Tenets of instruction shift from linear to higher-order thinking projects assignments. Students in this category can be given higher tasks to complete, either short or

long. But precautionary measures must be taken by the studio Teachers to avoid halo bias. The assessment criteria, grade test scores, and other evaluation strategies will inclusively ratify that every student succeeds (Michael, 2018) at different levels of impulse control.

In an architectural design studio, learners in the hyperactivity category are posed with many difficulties directing and maintaining attention. This manifests in very short attention spans, as studio activities take a very long time in their execution. Therefore, the studio culture policy may need to develop a more metacognitive higher-order instructional apparatus to combat such challenges. Students in this category can be given projects that help task imaginations and solve complex problems. The assignments and projects can be broken down into modular units proffering amicable solutions to design challenges at each stage of activities.

Problems of Organization Control and Rhetoric of Animal Architects Studio Culture

Since the ultimately aimed activity in the Design Studio Culture is to design buildings intelligently, drawing a few lessons from the Architecture of Animal kingdom may not be out of context. One is prompted to ask a few burdening questions about the animal kingdom: Do animals have a specific kind of Culture in a particular habitat? Or are there any facts and figures on the animals' culture's organisational control? It is, therefore, interesting to know that thousands of independent insects make sensible, coordinated decisions in massive cooperation *building activities*. In this ecosystem or cultural habitat, there is control of role play where some Bees may elect not to build but instead to forage, tend the queen, guard the hive, remove dead bees, feed the larvae, and so on. Many scientists have mistaken this set of Animal Architects to portray an *ideal centralized socialist-controlled Culture* (Gould & Gould, 2007; 2017). At the same time, they could be better described as the perfect exemplar of free entrepreneurs. More mysterious things worthy of observation is the Culture-generated activities that infuse the arts and sciences of design specifications in the artistry shape of a comb, the capping of cells, the building of larger- calliper drone cells, the construction of queen cells before swarming, and the modification of interior using Propolis to fine-tune the size of the opening and waterproof the interior dwelling spaces. All these occur within a Culture and habitus of Animal Architects with no formal training or certification. If one may ask, how do birds and beavers build elaborate dwellings that require immense forethought? How can Rodents or termites build structures that surpass human engineering? Can we explain such feats as a product of instinct? Many animals may need to build castles in the air, but how do we compare or contrast such cultures with humans? These questions and allusions may lead one to redefine and rethink Culture among architects in training and practice.

Need for Gestalt Politics and Role Play in the Design Studio Culture Habitus

Phenomenological Discoveries

As children simulate the discoveries of the virtual world with Toys through play, learning also takes place within a particular studio culture. The Gestalt experts assist students in the cultural habitus to explore strange boundaries that allow them to discover hidden potentials and opportunities. Such phenomenological inquiry focuses on the current skills, talents and gifts expressed in the architectural design works. It places attention on what occurs in the present moment. Projects and assignments are prepared to help the client (student) gain self-awareness and confidence in the design pursuit. During one-on-one didactic studio interactions, the studio Teachers may carry out a kind of assessment called one-on-one Crit jury on the combination of the geometrical form of the student's designs. As a didactic studio Teacher, the student may be probed deeper on the connectedness of design functionality related to manoeuvring spatial forms. Also, suppose the discussion is about the imagination of a specific design form or design dream. In that case, the didactic Teacher might suggest, "Tell me the concept behind this imagined (Corey, 2009) dream forms as if you were having it now"- simulation techniques in the digital sense. This type of investigation does not humiliate the student but creates didactically based solutions to the imminent problems. These role-plays first assists to develop a schema of learning awareness and second, build confidence in-studio students to do better and made to see a form of light shining at the end of a tunnel. It should also be noted that the didactic Teacher must avoid insulting or discouraging words and actions while persuading such students to engage in productive activities that can bring out more expressions of forms and ideas. This will cultivate their interests in architecture and enable their sense of belonging to stay within the cultured habitus.

Role as Stirrer of Creativity

Zinker, a Gestalt therapist, emphasized creativity as avenues to advance novel ideas and bravery for amicable solutions. So, exercises like writing, drawing, painting, etc., are described as therapy. He asserted that fostering the creative process is a whole life affair as creation evolves ideas of gestural images, patterns, textures, and sudden illuminations emerged as innovative products (Zinker, 1977). Upon these platforms, thematic ideologies may arise from such expressions to foster growth in different aspects of life. This can eventually become an algorithmic problem-solving process in the studio culture setting.

Role as a Bridge of Unfinished Transaction

In design studio Culture, when a project brief is handed out to the design studio students, certain aspects of the preliminary investigations like a case study and spatial analysis are yet to be clarified. The didactic Teacher may then discover that students are left with unfinished works. This may lead to some unvoiced feelings on concerned students and finally degenerated to a *deserted studio*

menace (Aderonmu, 2013). This can be a difficult problem that may lead to gradual withdrawal, anger, deviance, rejection, downcast, and other emotional anomalies. Therefore, it is imperative that the design studio teacher thoroughly guide the design student (client) through these unfinished works. This can be achieved without frustrating the students by seeing the Mentor-Teacher as a co-achiever. Another way is that the Teacher can paint similar scenarios of problem-solving techniques applied during personal experiences in school. Afterwards, the Teacher can now draw amicable inferences from the scenario that may raise the students' aspirations and evoke creative emotions. Through this, design students can be well guided through by such analogies.

Role in Attention to Body-language Culture

Body language is an effective tool and Armory in cultivating a viable studio culture and could be applied as a subtle indicator to sense and control intense emotions demonstrated by the affected students. Corey (2009) emphasized the importance of Movements, postures, and gestures to communicate significant meanings. This is important to control the actions and reactions of non-compliant students who may not ordinarily oblige to be given instructions during the studio classes. Whenever an action is observed in the design studio sessions, the design instructors and mentors as therapists often may or may not need to comment. But if they decide to do so, touches of humour can be applied as a medium of communicating a particular message across to the concerned fellows. Exaggerating a movement or gesture displayed earlier by the targeted student(s) could be an auxiliary tool to correct, rebuke or warn. Such methods are believed to assist in establishing ethically acceptable and unacceptable behaviours as written or unwritten in the Studio Culture policies and guidelines. The feelings attached to the exhibited behaviour clarify the conceived inner meanings (Corey, 2009) of the ethically acceptable and unacceptable behaviours demanded within the studio culture dynamics. More so, to allow or disallow a particular behaviour, symbolic gestures like tight frowning, crossed arms, handshaking, applauses or pat on the back may be induced as relevant by the instructors and mentors in the studio Culture habitus.

Practitioner-Client Rapport

During the Pupillage-Tutelage educational training of an architect, the Studio Culture life gives room for the *Practitioner-Client* relationship, generally described as one-on-one or person-to-person (Corey, 2009) studio consultation. The hierarchical barrier walls are broken to relate meaningfully and beneficially as design Teachers to Students. This transaction is enshrined around the *Practitioner-Client Rapport* as required in the professional field of practice. Before now, in the Beaux-Arts system, the master-apprentice mimesis method of imitation existed, and a student is perpetually locked into a particular master's style. Beyond this, dialogue has been recognized as a profitably training ethos in revolutionary pedagogic and ethical standards

of professional practices. Because a successful architectural design weighs well when a Client is participatory in the design process-product flows; so this kind of skill is acquired in the aura of studio Culture.

Role in Dialogue

An ideal Studio Culture recognizes and value interdependence between one student and the other(s). Dialogue is a very strong tool in creating knowledge, acquiring skills, and pursuing philosophical propriety. When a teacher (as therapist) engages in dialogue, the scope of learning increases and the teacher moves from a knowledge pot to a facilitator. The hierarchical power of the master-apprentice relationship sublimes gradually until solutions are proffered. This is the philosophical essence of dialogue. The culture of respect is more civilized, and the camaraderie of teacher-student relationships graduates daily into love and harmony. At the critical points when the studio student needs adequate attention, especially, there is a dire need for the design Teachers to be available at the agreed place (s) for one-on-one contact consultation with the students. At this point, consensus would be reached to resolve anthropometrics, spatial analysis, site planning and other adjustments on the floor plans. The Gestalt-didactic contact with the (client) student would be a straightforward, caring, warm, and acceptably (Yontef, 1993) honest exercise. The authenticity of agreed concepts and the candour of a unified line of thoughts between both parties (Teacher and students) are imperatively critical to prepare for the Jury day. Dialogue is lived, demonstrated and practised (Yontef, 1993; 1995, Yontef, & Jacobs, 2005) essentially beyond theoretical envisage.

Existential Role Play

The role-play of a didactic Teacher occupies empathy but not sympathy. Such studio culture policies consider tasks given to students with maximum consideration with the timeline required for submission and handy project scope. In addition, as strict as a studio culture policy guideline may be, existential practice comports and engages its partnership with human-face considerations in the Studio Culture 'modus operandi'. Thereby, the students' latent potentials may be activated in the limelight. By the gentle touch of empathy of the instructor on the students, the so-called students with learning and design disabilities could be assisted to succeed in the design endeavours.

New Partnership and Studio Culture

The American Institute of Architecture Students (AIAS) drew practical lessons, who recently entered into a new partnership with the National Architectural Accreditation Board. The parametric indices of evaluating architectural programs agreed that the studio Culture must demonstrate smart Studio Cultures (AIAS, 2008; 2018). More so, stakeholders also need to revamp the common elements of Teachers' capacity development programmes to integrate the development of Teachers' skills into the annual budgets; and repose confidence to facilitate creative, smart

learning environments (Popoola et al., 2018), knowledge creation and high stakes achievements. It is noteworthy that the overall culture and ethos can either enhance or impede the Teachers' development and learning Culture (Downing et al., 2007).

Methods

A survey research design strategy was engaged. Observations focus on grouped-oral interviews and questionnaires were sources of primary data. At the same time, the secondary data was obtained from the archives, records and literature. While design studios, students and teachers in the selected design studios were used as the sampling frame. The unit of analysis was obtained purposively from the students in the design studios 300, 400 and MSc levels because of the quantifiable curricular grains in the design studio spectrum. Also, multi-stage stratified purposive sampling was adopted as a technique and SPSS as an analytic tool for questionnaire responses. Interviews and observations were evaluated by content analysis.

Results

For many years, pedagogy has been established as the synthesis of the learning, teaching and jury assessment methods employed in the architectural design studio. But, all these sub-components of pedagogy have their values, codes and etiquette enshrined in the camaraderie of architectural design culture vis-a-vis the activities within the particular environment. Therefore, in an attempt to synthesize the Relationship between Pedagogy Culture and Environment, the results from regression analysis show that R-Square was 0.919, which means that the strength of these relationships is as strong, symbiotic and significant as (.919x100=91.9%) 92% approximately. The dependent variable was the mean score for pedagogy (mean scores of revolutionary models of teaching styles, learning styles and assessments). At the same time, the independent variables were designed studio culture and design studio environment. It simply means that the revolutionary pedagogy (practices of teaching, learning and assessment styles) had the following as their predictors:

Design studio culture.

Design studio culture (6) REGR factor score 1 for analysis 1, (7) REGR factor score 2 for analysis 1, (8) REGR factor score 3 for analysis 1, (9) REGR factor score 4 for analysis 1, (10) REGR factor score 5 for analysis 1, (11) REGR factor score 6 for analysis 1, (12) REGR factor score 7 for analysis 1.

Table 1: The Factor Analysis for Pedagogy, Culture and Environment

Predictors of Pedagogy	Standard Beta Value	Standard Error	df	F-Value	Significant (P-Value)
REGR factor score 1 for analysis 1	**.889**	.021	4	1832.430	.000
REGR factor score 2 for analysis 1	**.330**	.022	3	230.339	.000
REGR factor score 3 for analysis 1	**.224**	.020	3	122.925	.000
REGR factor score 4 for analysis 1	-.038	.020	2	3.527	.031
REGR factor score 5 for analysis 1	**.077**	.021	1	13.625	.000
REGR factor score 6 for analysis 1	**.101**	.020	2	26.334	.000
REGR factor score 7 for analysis 1	**.091**	.021	2	18.275	.000

From Table 1, the following deductions can be made: the mean score for pedagogy (dependent variable) depends on the following predictors in the following degrees:

The Predictors of Revolutionary Pedagogy

The predictors of revolutionary pedagogy are premised on the characteristics of its operational situations, tools, and participants, the most significant predictor in the *first order* (Beta value=.889, F-Value =1832.430, significant(P) value=.000,df=4) was regression (REGR) factor score 1 for analysis 1*(The Demystification of Studio Culture)*; next to it was(*Motivational Factors)REGR factor score 2 for analysis 1*(Beta value=.330, F-Value=230.339, df=3, significant (p)Value=.000; also significant was(*Studio Culture Ethics and Code of Conduct*) *REGR factor score 3 for analysis 1* (Beta Value=.224, F-Value, df=3, and significant value=.000).

These results explain that the Revolutionary pedagogic practice (i.e. the learning, teaching and assessment styles) as a dependent variable was subject to the independent variables of studio culture and environment. It was found that the first order significant predictors of pedagogy were (i) the Demystification of Studio Culture, (ii) Motivational Factors and (iii) Studio Culture Ethics and Code of Conduct.

The analyses of these variable factors are as clearly stated in Table 2. This means that, for the demystification of design studio culture, it is significant to demystify and redefine the respondents' impressions on 'Keeping Late nights in the design studio often aid to accomplish a great deal', Design Studio projects given are exciting, and Events in the Studio are predictable'. These myths were expressed and demystified according to the respondent's experiences.

It also means that in the order of priority, especially in organizing studio setting, planning, evaluation and scheme designs. After the issues on *studio culture and policy* have been outlined, it is imperative to consider next the *studio environment* where culture is cultivated. The design studio environment may predict the outcome of a particular revolutionary pedagogic practice when adequacy of lighting, auxiliary facilities and building services are given priority.

Table 2: The Factor Analysis for Design Studio Culture as Guidelines for Policy Making and Strategies

Predictors of Design Studio Culture	**Variable Factors**	**Factor Analysis**	**Significant (P-Value)**
REGR factor score 1 for analysis 1	Factor1: *The Demystification of Studio Culture*	Analysis 1: Keeping Late nights in the design studio often aid to accomplish a great deal(+/-)	*.575*
REGR factor score 2 for analysis 1	Factor 2: *Motivational Factors*	Analysis 1: Design Studio projects given are exciting	-.502
REGR factor score 3 for analysis 1	Factor3: *Studio Culture Ethics and Code of Conduct*	Analysis 1:Events in the Studio are predictable	*.530*
REGR factor score 4 for analysis 1	Factor4: *Altruistic Spirits of Studio Culture*	Analysis 1: Extreme Level of dedication among colleagues in the Design studio projects	.467

Variables in Studio Culture Myths

The myths in the studio culture were translated to simple variables and were patterned understandably to harvest opinions from respondents. According to their degrees of significance in the prevailing design studio culture specific to the four selected architecture schools, the analysis showed these variables and their respective component loadings. The variable and component factor loading yielded results in four (4) dimensions of the Demystification of Studio Culture, Motivational Factors, Studio Culture Ethics and Code of Conduct, and studio culture's altruistic spirits. The emergence of these factors was found timely to proffer solutions on the studio Culture as the need may arise for stakeholders, i.e. issues on the deserted studios, low design abilities of students, studio culture policy and paradigm shift in architecture schools.

Some studio Teachers and instructors identified that the design *inabilities* among students in different categories had been attributed to the design students' acute productions of innovative projects (Sidawi, 2009). In the same vein, previous research also attested to possible causes that influence the educational outcomes from design studio culture. It revealed that in many cases, the teacher served as the fountain of knowledge while the students' minds appeared like clean slates, anxiously waiting for the knowledge outpouring (AIAS, 2008; 2018) by the Teachers. Not only that, the unhealthy student work habits of behaviours *such* as "all-nighters" and "exacto knife scars" (AIAS, 2008) also have imposed negative experiences, which consequently become the super-ego and pride for many students (Fisher, 2018).

In a like manner, student isolation from the rest of their colleague from other departments makes them alienated as they spend most of

their time with other architecture students in their academic studios, thereby making the "outside world" irrelevant (Anthony, 2007; Boyer & Mitgang, 1996) to the design task in which they are immersed.

Another negative notion against the 'design studio culture is the curricular centrality that had long been painted on stakeholders' mindsets, regarding the design studio as the most important course. This warranted students in the time past to disregard other courses by being isolated with strong addictions to the studio *habitus*- intellectual and physical isolation (AIAS, 2002). Also worth mentioning is the lack of educational intelligence ethics for revolutionary pedagogical practices among the studio instructors. This refers to the studio instructors' inabilities to apply the contextual pragmatics as a pedagogic armoury to pilot the studio Culture Vehicles to a didactic haven. Most teachers in higher education, particularly in professional programs, are not taught to be teachers—the type of education received by architects is knowledge-based but practical and highly open-ended. Architects were only trained to be architects, not as teachers, as many were not indoctrinated to the praxis of philosophy, sociology, and psychology of education. Therefore, many Teachers imitate their own Teachers' teaching and jury-critiquing methods (Anthony, 2007).

The design studio education is iterative, cyclic and students tend to interpret their creativity or worth through grades (Kuhn, 2001). Therefore, it is required that a dialogically overt practice should be put in place to establish a student-centred revolutionary pedagogic approach for students. In the same vein, students may also be allowed to participate in the formulation of the grading and assessment criteria. It is also ethical for such criteria to be aligned as a template on the design requirements highlighted in the studio briefs.

Respondents' Perception of Architectural Design Studio Culture Myths

In a group interview that was carried out across the four selected schools, the following were the comment about individuals' perceptions on certain myths about 'studio culture'. The essence of this aspect was to harvest opinions to know how to navigate in an entirely new direction or main the traditional camaraderie of design studio culture. Myth could be a story from ancient times, especially one that was told to explain natural events or to describe the early history of a people (OALD.8, 2015); such is a simile that characterized studio culture in some schools. These myths influence the mentality of students and promote certain behaviours and patterns. The following myths were posed questions to respondents as students in different groups across the four (4) selected schools. The qualitative methods were used in its reports and analysis; their responses were based on understanding what these myths perpetuate in the students' experiences.

The Emergence of Best Ideas in the Night: Abiodun (O.A.U, M.Sc. Student), signified, 'I

agree, with this myth because I have gotten my best inspirations within those hours. Also, Arinze (CU), stated 'I don't agree because the night comes when no man works, it is too quiet for my kind'. 'This is achievable when you allow your mind and body to rest after a day's work, responded, Oluwagbolahan (CU). Kingsley (LAUTECH, 300 levels) said that it only works for those active at night, and since I am not one of them, it does not work for me.

Architectural education should require personal and physical sacrifices: Shodunke, an architecture student from CU, responded that' in architecture, both your personal and physical well-being will be sacrificed. Take, for example, you always rest for eight hours a day, but when you begin to study architecture, you begin to spend more money, eat less, restless, and your relaxation time reduces more and more to six, five and so on. Another (Oluwadamilare, 300 Levels, CU) said that though, am not in support of it all, but it is equally essential for good grades.

Creative Solo-Artistic Struggle: 'Yes, I agree (Dayo, 400 levels LAUTECH), architecture should be run with the undivided mindset'.

Creative Energy only comes from the Pressure Deadlines: Okereke (300 level, UNILAG) revealed in his opinion that 'the best ideas come at deadlines for submission and presentation of designs; this period keeps me thinking to a fruitful end, I agree with this myth'. Another respondent, Austin(O.A.U,400Levels), stated that 'this is true in my own opinion because when you are given a deadline, you will be forced to go to extremes to develop an idea which if not rushed too much, will leave you, in a sense astonishment after completing such idea and meeting the deadline.

Collaboration with other Students means Giving up the Best Ideas:

Aina (CU, 400 Levels) asserted that collaboration encourages teamwork since no man is an island. Also, in the same regard, Oyindamola (O.A.U, 400Levels) acclaimed, 'I do not think this is true because collaboration between students is supposed to help one learn better and not supposed to rip you off your ideas.

Students should not have a life outside Architecture School

Kunle (O.A.U, 400 Levels) stated, 'I don't think this is true, because, as we have learnt, an architect should be multidisciplinary, i.e. have knowledge of the various field of learning, and being permanently in the studio does not help such idea. Emmanuel (CU, MSc.) opined that 'it is true, as truly dedicated architecture students rarely have friends outside architecture school. Another respondent (Folu, CU, 300levels) asserted that 'it is partially true in the sense that the workload in the studio is heavy that most of all outside activities fall in seconds'.

The Best Students are those who spend the Most Hours in Studio:

Banke (UNILAG, M.Sc.), I don't think so, as it is not about the quantity of time you spend

but the quality. Harnessing from the respondents' opinions, certain myths are true and false. But according to AIAS (2008; 2018), studio culture acculturates architectural design studio students with core values of respect, sharing, leadership, optimism, innovation, collaboration, civic engagement, teamwork, dedication, and other forms of studio acculturations. From the four (4) selected schools, these values persist. At O.A.U, in the course of the author's investigation, students of year three (3) and four (4) were found at alert on the pin-up boards, with their works as if waiting for the arrival of a chief judge. Still, suddenly, the final jury examination was postponed. At about twenty minutes after that, students were found already sleeping deeply on the benches along the studio aisle. This revealed extreme dedication, sleepless nights, spending most hours in the studio, personal and physical sacrifices, and other studio activities and cultural experiences.

The Demystification of Design Studio Culture

In a sense, design instructors may sometimes be authoritative in handling briefs and tenets of instructions. This may encourage individuality and hinder creativity. It was observed in this study that many design studio activities lack dialogue (factor1: variable 3 with mean values of *3.94 and factor loading .587* in Tables 1 and 2). This method may pose a masking wall between students and teachers during desk crits, pin-ups and jury. It is also attributed to the seeming notion that the design instructors deliberately punish students by keeping long hours for the studio works and Jury exercises.

On the other hand, interactive open-minded studio culture may play essential roles in fostering a sense of togetherness and lasting friendship (factor 1: variable 2) in the studio. Thus the deficiencies of these parametric factors may diminish engagement in studio activities and pave the way to "deserted studio culture" (Aderonmu, 2013). Lubart and Sternberg (1995) observed that for creative seeds to germinate well, there is a proportional need for a supportively rewarding environment viable enough for productive activities. To initiate creativity in the design studio, both the design studio Peers, Jurors and Tutors need to demonstrate enthusiasm among students and encourage audacious bravery in a very sincere manner. Moreover, the teachers need to be didactic and encourage students to integrate the salient factors arising from self-criticism as feedbacks comparable to criticism expected from Jurors and peers (Williams, Ostwald, & Haugen, 2010) on the would-be Jury day(s).

In any Studio Cultured activities, it is expedient that the didactic teachers need to be vigilant to the students' gestural dispositions of being creative, curious, adventurous, daring, and audacious to take the risk. However, the design studio expects the instructor's mastery of pedagogic content knowledge and the students' understanding to assimilate the power of instructional Tenets (Lindstrom, 2006; Salama, 2005) as given by the mentors. The design instructors (Seidel,

1994) clearly state the studio programme's goals or objectives to build confidence in the studio students. And this can be a template to work with from the beginning of the studio down to the assessment and grading processes of the entire programme.

Table 3: The Demystification Factor of Architectural Design Studio Culture

Factor 1	**Variables**	**Mean Values**	**Factor Loading**
The Demystification of Design Studio Culture	Keeping Late nights in the design studio often aid to accomplish a great deal(+/-)	3.67	.575
	Studio climate gives room for lasting friendships	3.61	.606
	The desk crits, pin-ups and jury seemed to be punishing students by keeping long hours(-)	3.94	.587
	I always feel a sense of togetherness as found in a communal culture(+)	3.87	.653
	There's always a sense of personal sacrifice in the studio(+)	3.91	.631
	I think less about issues left back at home when in the studio with others(+/-)	3.84	.614
	I am always Relevant among my studio colleagues(+)	3.92	.596
	Studio culture as room for self-reflection over my design process(+/-)	3.87	.583
	Studio culture as opportunities for inter-activities among students (+).	4.05	.542
	Teacher support to students' capacity building in studio work (+).	3.60	.738
	Peer support is readily available among studio students(+)	3.63	.778
	Students' clear understanding &interpretation of studio culture policy(+/-)	3.45	.704
	Studio culture policy guides& enhances my performance in studio works(+/-)	3.59	.570
	Good Studio organizational structure in my school(+/-)	3.61	.520
	Studio Teacher are readily available for instruction & consultation(+/-)	3.37	.604
	Good Competitive-spirit value in studio	3.87	.529
	Studio culture provides avenues for showcasing outstanding works and discovery	3.70	.610
	Studio culture gives opportunities for potential discovery and maximization	3.80	.478
	Studio culture creates avenues for Global and national exposures	3.67	.578

Furthermore, design Tutors urgently need to start rationalising intuitively subjective opinions into achievable objective assessment-grading criteria; because the instructor's intuitive-subjective understanding of design studio criteria also requires its accurate alignment with rational teaching and judgement of works. This way, halo bias in

assessing and grading creative assignments may be avoided. If these factors are not well guarded, the unwanted impartial judgement of works may leave students in total confusion because they may not know the parametric requirements to be followed by students as guidelines in the presentations of works; talk less of parametric criteria the assessors would apply in assessment and grading of creative works (Williams, Ostwald & Haugen, 2010). Unethically, some studio cultures optimally take cognizance of the students with the best-looking projects (AIAS, 2008; 2018), not minding the algorithm of process, praxis and product development. The application's assessment criteria were subjective and non-specifically fussy in most cases. Therefore, studio culture myths need pragmatic demystification (or elucidation or transparency) by aligning the studio briefs' expectations with unalloyed studio culture policies, which resonate with revolutionary practices of being intuitive, systematic, objective and goal-specific.

The Motivation Factors and Architectural Design Studio Environment and Culture Policy

In Table 4, the camaraderie of design studio culture suggested that motivation within the studio culture habitus can easily be improved by means of good handling of exciting projects, participatory practice, good welfare package, clear instructional tenets, exchange of experiences, good learning environment, innovative projects and viable funding.

Table 4 Motivational Factors, Design Environment and Studio Culture Policies

Factor 2	Variables	Factor Loading
Motivational Factors	Design Studio projects given are exciting	-.502
	Availability of funds for design studio community projects	.578
	Good sense of active participation in studio-community projects	.558
	Studio Culture gives Good Staff attitude& morale to work	.661
	The general working environment for staff and students makes research and consultation interesting	.595
	Staff performance is enhanced by studio culture policy	-598
	The teacher seems to have a well-structured instructional tool for teaching	-646

But across most architecture schools, deficiency in *motivation* has caused many studios to be deserted (Aderonmu, 2013), as evident in literature and practice records (Ekstedt et al., 1999). Good incentives and funding are powerful motivation tools to cultivate the stakeholders' interest (both staff and students) and keep it growing. It stimulates them to work in extraordinaire and perform better with great a sense of belonging to the school and sustainable camaraderie Culture of lasting friendship among peers.

The deserted studio as a menace can be said to have taken its root from poor handling of briefs, uninteresting projects, and tenet of instruction. Therefore, as opined by the respondents that '*design studio projects given are exciting*' (factor loading-.502), instructors need to make the design projects exciting both in handling and mentoring. Another significant motivational variable was that the 'Staff attitude and morale to work' (factor loading.661) and working environment (factor loading.595) has a significant effect on the performance (-598) of both staff and students as enhanced by studio culture policy.

From Table 5, most respondents, 226(47.9), disclosed that they enjoyed a good working environment, next to it was the creative innovation70 (14.8%), flexible working hours 64(13.6) awards and only a few enjoyed subsidies 1(0.2%) on facilities.

Table 5: Availability of Funds and Other Incentives for Respondents

Incentives	**Frequency**
Scholarship	58(12.3)
Good working environment	226(47.9)
flexible working hours	64(13.6)
creative and innovation awards	70(14.8)
free access to internet facilities	48(10.2)
capacity building programme	5(1.1)
Subsidies on Facilities	1(.2)
Total	**472(100.0)**

In order words, from Table 5, available adequate funding has been recognized through this investigation to enhance stability and promote dynamism. It also supports creative and innovation awards (Broadbent, 2008).

Therefore, the interactive social and psychological process thrives excellently in a well-cultured environment. The designer navigates with the algorithm tool to proffer amicable solutions to the design problems. Broadbent (2008) described the design process as a creative activity, peer to peer communication and convergence of creative thoughts among participants. Therefore, the architectural process of designing consists of several sequential stages described as initial analysis, design synthesis, appraisal of proposals and evaluation (Uji, 2002).

Incentives as a Student

Table 5 shows various categories of incentives as provided generally by four (4) selected schools. Some respondents, 70(14.8%), disclosed that they enjoyed creative and innovation awards, while very few indicated that they wanted subsidies on facilities. The implication of making incentives available to students is to motivate them to learn and learn well. But the effort needs to be geared towards making the design studio environment very conducive to learning. Another incentive aspect that requires empowerment is capacity

building, organising an architectural design studio to help architecture students discover their talents and develop their skills.

Table 6: Studio Culture Ethics and Code of Conduct

Factor 3	Variables	Factor Loading
Studio Culture Ethics and Code of Conduct	Events in the studios are predictable	.530
	Teachers' Effective Leadership-objective Teaching style in the studio	-.468
	Good Value and respect for studio space	.529
	Our Studio resolved conflicts amicably by dialogue among staff and students	.530

According to AIAS (2008; 2018), Studio Culture Ethics and Code of Conduct must attract great respect from the users as they operate within the studio space and habitus. Also, the Studio Culture and guidelines must give directions to the students, being able to predict the events in the studio. Also, the design studio revolutionary practices need to offer opportunities to learn professional work habits; through scheduling, time management, and keeping orderly records and workspaces.

Strict adherence to ethics and conduct positions the studio environment better after being used. Studio Culture ethical values echo the students' mentality that "you are passing through these design studios for a short time and need to keep them in good shape for thos*e coming behind*". The various users should be imbibed with the camaraderie spirit of studio culture by premising its "modus operandi" in a context viable for developing self-criticism, peer criticism, jury critique and advocative criticism. Students should be reminded by faculty members about this etiquette at the beginning of the semester and followed up by the task force and facility management committees until they graduate. This would imbibe a Studio culture of preservation transferrable to the younger generations.

Discussions

The design studio culture exists in its physical environment, social structure, rituals, celebrations, daily rhythms and time cycles. The studio space as a habitat for this kind of culture has a dual existence in the formal educational realm and the realm of spontaneous and informal school life (Bauhaus and Ecoles premier schools). The studio space accommodates home, workplace, habitat, and niche for socialization. In some ways, it recreates the professional life in the schools as preparation for design firms professional practice, although grossly deformed and tends towards a negative direction. Students try to project hard-working, dedicated, highly motivated, achieving individuals whose greatest satisfaction and happiness are based on professional success and recognition.

Interpretations and Implications

The architecture student is motivated by a culture of achievement, innovation, professional growth, and development of subject mastery, genres and fluency in communication skills development. Competition is good when kept healthy, but unhealthy competition can lead to deviant and poor attitudinal behaviours. Studio culture inculcates a sense of barrier breakers, line crossers, achievers and workaholics rather than slackers and truants. Therefore, students need to develop and maintain the rules of engagement and the benchmark standards of good attitudes and quality works with pragmatic, versatile and resilient approaches to solving design and societal problems. By the mode of professional training, architects are always found in practice as decision-makers, client-advocates, opinion leaders, the informal heads of a micro-society (i.e. academic design studio, practice studio, management offices, co-ordinators of programmes of events, housing and city developers), and they set the model for behaviour patterns in the societies. The rest of the classmates emulate and imitate, and they either imitate or emulate the mentors' philosophy of work ethics. There is a strong pressure to entertain procrastination as work pressure rises. The dynamic culture acculturated in the studio, socialization and interaction is framed and presented as work and professional activities. Whether genuine or not, the air is filled with dedication to the profession, the pleasure of work and achievement, and the satisfaction of experiencing personal growth.

This type of student culture can enhance the educational experience and the informal learning processes. The virtues of work ethics and desire for growth should be encouraged while particular side effects need to be contained and filtered away. Faculty might think about curricular activities and engagements that transcend formal teaching and seamlessly penetrate the after-hours realm (studio hours). Design studio teachers (faculty) should also facilitate collective work, sharing and exchanging information and mutual feedback and scaffolding. As adorable and idea-generating cultural spaces, the architectural design studios require specialized facility planning. Universities should place special attention and consider creating a studio ambience that stimulates learning engagement; amenities for collective living and prolonged stay in the school facility; and environments that cater around the clock to the needs of the students. The studio culture policy needs to be reviewed to align the cultured way of teaching, learning, and living with the lifestyle of future designers.

Leadership Responsibility

Leadership role among architectural design studio students is a significant factor in architectural education training. In today's building industry, Architects are the team leaders; they coordinate projects, supervise the construction of buildings, and act as consultants of various projects. Recently, architects have been challenged for failing to

steer the leadership role hence the encroachment of other professionals into the architects' exalted, noble seats. Therefore, the aspect of leadership was treated crucially in this study. According to the results in Table 7, most students had no leadership responsibility, while only a few were involved in leadership issues. This is a pointer to develop leadership capacity in architecture students and develop capacity-building programmes for teachers. As the team leaders in the building industry, architects need to be developed not to relegate their role to the background. According to this study, the finding highlights the emergent need for a sustainable leadership culture code of conduct and ethics (see table 6). This type of objective learning culture promotes group dynamics of leadership-followership interaction, teamwork, dialogue, collaboration, discussion and brainstorming.

Table 7: Leadership Responsibility

Response	**Frequency**
No	348(69.2)
Yes	155(30.8)
Total	**504(100.0**)

Therefore, it suggests good dynamics expected in a situated learning environment like an architectural design studio where group projects are regularly given out to students and be coordinated by group leaders. Besides that, leadership responsibilities also arise within social platforms like associations of diverse categories. So, when the respondents with leadership roles are compared with the ones without leadership roles is 155(30.8): 348 (69.2), approximately ratio 1:2. As part of the studio culture in the four (4) selected schools, studio days were almost in rhythm for the chosen architecture schools.

Table 8 Number of Days for Studio Attendance

Number of Days for Studio Attendance	**Frequency**
1day	3(.6)
2days	39(7.7)
3days	292(57.8)
4days	133(26.3)
5days	33(6.5)
6days	5(1.0)
Total	**505(100.0)**

At least three (3) days in a week are generally allocated for the architectural design studio course; Mondays, Tuesdays and Thursdays. From table 8, the majority, 292(57.8) of the respondents as students, signified 3days of studio attendance, next to it was 133(26.3%) for 4days, only very few attended studios for 1day (0. 5%). This means that 3days of architectural design studio attendance persists in the four selected schools. The categories of 1day attendance may have deserted the studio,

and 5days and 6days worked extra hours in the design studio.

Table 9 Consultation with Mentors

Response	**Frequency**
No	60(15.1)
Yes	338(84.9)
Total	**398(100.0)**

From table 9, most respondents, 338(84.9%), signified yes for consultation with mentors while a few 60 (15.1%) disclosed their non-participation in talk of their studio projects with their mentors. It simply means that more students consult with their supervisors during architectural design studio projects.

Implication on Mentors' Instructional Strategy

The mentors or instructors still need to make enquiries and re-strategize their techniques on 15.1% of respondents who abscond during consultation hours. Another point worth mentioning is that consultation hours need to be well stated and followed diligently by both teachers and students. Since consultation is a feedback process, it is also a simulation of the architect-client relationship obtainable in the field of practice; effort needs to be geared to motivate students to consult regularly till the day of submission. More so, the mentors may still need to look inwardly at the best practice to involve the respondents who absconded (15.1%) in the consultation process of an architectural design studio. This could serve as an underpinning tool that can be used to indoctrinate students to develop good ethics required in practice for an effective architect clients relationship. For t is ethical that a good rapport between an architect and a client needs to be established during the architectural design process. In the schools' situation, the student is the architect while the studio teacher plays the role of a client.

Table 10: Number of Hours for Consultation

No. of Hours/Studio day	**Frequency**
1hr	343(80.0)
2hrs	81(18.9)
3hrs	2(0.5)
4hrs	3(0.7)
Total	**429**(100.0)

Regarding Table 10, the majority, 343(80%) of respondents, disclosed that they were involved in 1hour of consultation with their mentors, next to it was a few respondents

81(18.9%) consulted for two (2) hours and only a very few3 (0.7%) respondents did four (4) hours consultation. It attested that most design studio teachers did not attend to students' talk outside 1(one) hour, and a few attended to respondents as students in the range of two (2) to four (4) hours. As stated in table 9, 15.1 % of the respondent students did not consult. This category of students can be checked if consultation is allotted a certain percentage of marks and design studio attendance. Logically, the more a student consult with a supervisor, the more clarity that can be achieved by both the students and supervisors. Apart from transparency, the design solution can be better offered when a decisive agreement is reached between the students and teachers. In this case, a teacher can advocate and facilitate on students' behalf during jury presentation (Advocative Criticism).

Conclusions

This paper has described the results of studio culture as a predictor of Revolutionary Pedagogic Practices in three hierarchical orders: The findings showed design studio culture as the most significant predictor of Revolutionary Pedagogic Practices in the four (4) selected universities. This predictor was yielded in three (3) hierarchical orders: (i) the Demystification of studio culture, (ii) Motivational Factors and (iii) Studio Culture ethics and Code of conduct. The study established commonalities in the "modus operandi" of the selected architectural design studios. This work recommended that the stakeholders review the studio programmes to demystify studio culture, motivate the students, and repackage the ethical code of conduct and guidelines. It also posited that emergent needs to close students' achievement gaps exposed to different architectural education climes. Finally, a Culture-specific Revolutionary pedagogic practice is required for competency and high-stake achievements in architectural education and life-long work ethics required in professional practices.

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