

## A Review of Creative Works as an Assessment Criterion for Architects in the Academia

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### Abstract

Appraisal criteria of a few Nigerian universities studied indicate that ‘creative works’ can be accepted as equivalent to the traditional scholarly research or as a substantial contribution to knowledge, thus indicated in the guidelines as part of the review or staff appraisal criteria for promotions. This notion is commonly held *de jure* but is rarely upheld *de facto* for two main reasons; firstly, is the question of what constitutes creative works and secondly, is how design can be equated as research or contribution to knowledge. The purpose of this review is to highlight the dilemma architectural professionals in the academia often face in peer-review processes during appraisals for promotion. The paper employs extensive review of literature from secondary sources as methodology; examining arguments of what constitute creative works, practice-led research and the assessment/evaluation processes for the fields of creative arts, architecture and design. It reveals some assessment techniques that if harmonized and adopted reflect the strengths of creative works and appreciate practice-led design as research and valid contribution to knowledge. The study compares results from a previous survey on academic staff disposition to promotion criteria in Nigerian universities with some of the proposed assessment techniques in this review. The purpose is to discover areas of similarities and consensual perspectives that could be adopted and operationalized for architects in the academia in Nigeria.

**Keywords:** *Appraisal; Architecture; Contribution to knowledge; Creative works; Practice-led design*

## 1.0 INTRODUCTION

Architecture is described as a creative, multi-disciplinary fields founded in three major intertwined traditions; arts, technology and humanities (University of Oregon, n.d.). It is also heavily impacted by the social sciences as the core of its practice is anthropological; providing for all forms of human activities. Architecture also delves into the studies of physiology and ergonomics, geography and the environment. Hence the need for schools of architecture to encourage broad and diverse specialism amongst her teaching staff and to deliberately ensure that equal recognition is given to scholarship and practice (University of South Florida, 2005), just as in basic and applied research.

The teaching of architecture is predicated on sound knowledge in design and a diversity of specialized subjects like fine arts, technical drawings, history, philosophy, anthropology, climatology, mathematics, physics, biology, chemistry, etc. All however, are applied to the design studio, which is the core of the architecture programme. This implies that architecture is a unique subject that requires unique approach to appraising instructors in the subject area.

It is on record that several scholars have investigated the issue of research assessment in the creative fields like arts, architecture and other design-related disciplines. Studies in this area from several countries, institutions and culture-specific viewpoints have contributed immensely to research quality assurance, academic fair play and celebration of artistic creativity in the academia to some extent. University of Oregon (n.d.) emphasises that '*Criteria for promotion and tenure recognise applications of knowledge through architectural works as well as creation of knowledge through traditional research and scholarship*'. The authors also noted that built and un-built projects completed for commissions, exhibitions or competitions are acceptable for promotions. However, there are no internationally accepted standards that harmonize practice-led and traditional scholarly research in a creative design discipline such as architecture.

## 2.0 PROBLEM STATEMENT/ RESAERCH QUESTIONS

On the issue of acceptance, institutions and research quality assurance bodies in countries like Nigeria are yet to accept practice-based design works tendered alongside traditional scholarly research as part of the appraisal process in architecture. The questions this often raises are; how does one assess creative works? How does creative works equate to traditional scholarly research? And why would works for which professional remunerations have been collected still be tenable for appraisal assessment?

Based on these research questions, this study seeks to investigate the prospects of design as research or practice-led research by understanding the various concepts; reviewing peer assessment practices in similar creative design disciplines; and exploring the various schools of thought on assessing creativity in design. This review also hopes to lend a voice in advocating for a more open attitude to the measurement of research impact, by considering practice-led research within the context of assessments for promotion in the academia.

## 3.0 LITERATURE REVIEW

In the last decade, there has been no shortage of works on research assessment in the creative arts. This ranges from disciplines such as interior design, landscape architecture, industrial and product design, architecture, visual and performing arts. Leong (2014) examined what counts as research and the key criteria governing the assessment of academics in the music and visual arts discipline in the Chinese society. Several scholars have argued that the traditional appraisal techniques used for evaluating what counts as research in the creative arts discipline is inadequate. Mehzoud et al (2012) argued for the development of an exhibition model as an evaluation of creative works in the interior design/ interior architecture discipline. Armstrong (1999) explored the use of design studios

as research in landscape architecture. Rust et al (2007) produced an extensive review on practice-led research in art, design and architecture and the disparities among these disciplines in their engagement and assessment processes.

However, it is only apt to commence this review by clearly defining the terminologies and concepts that this study is concerned with. In order to appreciate the various perspectives of scholars advocating for more holistic research assessment parameters in the creative arts disciplines, the concept of research, research by design and creativity must first be understood.

### 3.1 Research

The UK Research Assessment Exercise (RAE) definition of research states that:

*'Research must be original investigation undertaken to gain knowledge. It includes work of direct relevance to the needs of commerce, industry, scholarship, the invention/generation of ideas, images, performance, and artifacts. Where they lead to new or substantially improved insights and the use of existing insights to produce new material, services, products etc.'*  
(RAE, 2006)

In examining this definition further, it suggests that what constitutes research ranges from ideas expressed literarily, in images or by performance to a broad spectrum of other more tangible inventions. The Research Excellence Framework (REF) which is the framework for assessing and funding research in the UK defines research as "a process of investigation leading to new insights, effectively shared (REF, 2011). This framework differs from that of RAE in what constitutes research. REF includes intellectual property, other forms of patents, images and other work published on non-print media as well as buildings as part of research. Similarly, the Royal Melbourne Institute of Technology portfolio of design and social context states that research could include feature articles, creative writing, built works and products, as well as visual research on DVD and websites (RMIT, 2005).

In essence, the forms of expression for research are almost limitless as long as knowledge is gained and insight is improved in the long run. The RMIT joins an increasing number of institutions around the world that advocate for a wider definition of research and a more open attitude to the measurement of research impact.

### 3.2 Research by Design/ Practice-Led Research

Research through practice is also referred to as research by design or practice-led research. It should not be misunderstood as design research, research for design or research about design. The latter is systematic inquiry of the embodiment of configuration, composition, structure, purpose, value and meaning in man-made things and systems (Archer, 1981) or a systematic search and acquisition of knowledge related to design and design activity (Bayazit, 2004). In this sense, they maintain that an artist creating a work of art cannot be considered as doing research, rather it is one observing and analysing how the artist is working or the work the artist is doing that is said to be engaging in research. This concept is at variance with the idea of research by design or research through practice that is the focus of this review.

Manson (2006) in discussing operations research defines design research as 'a process of using knowledge to design and create useful artefacts'. In addressing the question 'can design be research?' Manson (2006) was of the opinion that design in itself is a knowledge using process and not a knowledge generating process and so cannot be considered as research. In effect, he suggests that creative works by itself is not deemed to be research if not accompanied with a systematic and rigorous analysis; based on standardized methodology; with contribution to knowledge; which is disseminated and assessed by peers for quality assurance.

But Armstrong (1999) does not support this view. She believes that creative works are a knowledge generating process. Using the design studio as an example, she examines the generation of knowledge and explores specific forms of rigour associated with reflective creative works. Other scholars also support the claim that studios are significant generators of new knowledge and scholarship especially Landscape Architecture and Architecture as revealed through end of semester exhibitions and publications of studio works (Kerb, 1997; Vulker and Johnston, 1997).

So what therefore constitutes practice-led research? Rust et al (2007) is of the opinion that practice-led research varies in meaning with discipline, location and person. Yet they suggest that “it is research in which the professional and/or creative practitioner of art, design or architecture, play an instrumental part in an inquiry”. In the UK before 1992, creative works were not accepted as research by frameworks such as the RAE. When Polytechnics were converted to universities in the UK, all creative works previously tendered by scholars as research were reassessed and described by the RAE as merely professional practice pieces and incorrectly tendered as research. The reason was that at this time, there was no clearly defined typology in the academy categorizing this form of knowledge.

It took scholars like Tebby (1994) to attempt in providing a clear correlation of art and design practice with research by showing how practice-led research interrogates through analysis and evaluation. The fact is that there is actually a high amount of practice-led research in architecture not taking place within institutions and not handled by creative academics. Rather, it appears that some large design firms are known to maintain Research and Development (R & D) departments that undertake research for intellectual property and to remain on the cutting edge of hi-tech practice. Rust et al (2007) mentions the likes of Foster and Associates that maintain a research department concentrating on new materials and complex geometrics. Also, the likes of OMA focus on intelligent buildings that imbibe robotics or mechanical actuation techniques to make them adaptable.

### **3.3 Creativity**

Hennessey and Amabile (1999) state that “creativity is a concept that is difficult to define and even more difficult to measure”. However the encyclopedia of creativity offers two definitions of the concept, a conceptual definition and an operational definition.

*Concept Definition:* A product is considered creative to the extent that it is both novel and an appropriate, useful, correct or valuable response to an open-ended task.

*Operational Definition:* A product is considered creative to the extent that appropriate observers independently agree that it is creative. Appropriate observers are those familiar with the domain in which the product was created or the response articulated. This is because to determine levels, quality and impact of creativity, it is appropriate that the creativity criteria for that area be laid out by the creators or experts in that field (Hennessey and Amabile 1999).

### **4.0 RESEARCH DESIGN AND METHODOLOGY**

Being a review, this study adopts a qualitative approach. As such, the structure of the paper does not include the empirical format of data collection, analysis and results. Information and data are obtained primarily from secondary sources such as research reports, published works, online sources and conference proceedings. In addition, policy documents were also used where available. With the fact that there is no shortage of material on promotion criteria in general, only information directly related to the subject and the context of the study was reviewed. Even at that, not all data were deemed necessary to be included in the review and this was to ensure manageability of the scope of the study.

## **5.0 REVIEW AND ANALYSIS**

### **5.1 A Review on Promotion Criteria in Nigerian Universities**

The three key roles most Nigerian universities focus on are; the advancement of knowledge through research, dissemination of knowledge through teaching, and community service. The promotion of an academic staff in Nigerian universities is based on how well the staff has performed these functions through tasks such as teaching, supervision, publications, research, consulting, conferencing, administration, and community service (Archibong et al 2010, Salmuni et al 2007). The general promotion criteria apply to all cadres of academic staff and across all disciplines and fields in Nigerian universities. The criteria are summarized as follows;

- A favourable report from the Departmental/ Faculty Appointment and Promotion Committee
- A waiting period of three years at each rank before qualification for promotion
- Possession of PhD degree is mandatory for candidates for Readership and Professor. Promotion to other ranks below Readership can be attained with a Masters degree with course work and thesis.
- Stipulated number of publications in reputable journals and/ or in standard texts.
- Two positive reports from external assessors are required for candidates up for promotion to either Reader or Professor.

However, in a survey of 349 academic staff across five different faculties (Education, Environmental Science, Engineering, Social Sciences and Sciences) in three public universities in Nigeria (University of Calabar, Cross River State University and Ambrose Ali University) by Archibong et al (2010), 72.5% of respondents were not satisfied with the current generalized promotion criteria. The respondents were also given an opportunity to include or suggest newer criteria for the promotion process. A summary of the suggested promotion criteria include;

- Oral interview before promotion
- Assessment of academic staff by students
- Evidence of active participation in professional body activities
- Sabbatical leave experience before promotion to professor
- Allotting equitable score to all the criteria
- Increasing the scoring for teaching
- Accelerated promotion

Of the seven criteria suggested above, emphasis was laid on three; firstly, the inclusion of oral interviews to enable the candidate defend claims; secondly, student assessment to give feedback on teaching; and thirdly, participation in professional activities to enable the staff interact with others in the same field, improve their skills and provide networking opportunities.

The survey results did not provide discipline-specific criteria so as to ascertain the promotion criteria preferences of each of the faculties or disciplines.

### **5.2 Research and Creative Works in Architecture**

Practice-Led research in the design disciplines was first employed in product and machine designs to improve performance of the products. Repeated performance tests inspired the development of new improved designs to enhance product efficiency and meet user requirements and satisfaction. Practice-Led research was also employed in furniture and sanitary ware designs, where the principles of ergonomics were applied to help create healthier and safer work and home environments (Bayazit 2004). By this time, practice-Led research began gaining ground as a means of solving problems and making decisions. Eventually, with the shortage of housing after the war, practice-Led research was employed in architecture for the design of prefabricated housing. Since

then, the need for enhanced climatic comfort, energy efficiency and a changing climate have led to innovations in energy efficient designs, as well as adaptable and intelligent building designs. In essence, human and environmental changes have contributed in establishing design as research in architecture. However, widespread acceptability and value of design as research is still lacking.

Oswald and Williams (2008) in a survey of architects in the academia in Australasia observed that most strongly agreed that architectural or practice-led research is as important as research in any other professional area but not nearly as valued. Their survey indicated that between 60-70% of architects in the academia in Australasia are actively engaged in traditional scholarly research and only a meagre 5% are engaged in practice-led research. This was not unconnected to the fact that the majority who would rather pursue practice-led research were not having their works accepted or valued as research.

It is generally accepted in principle by most schools of architecture that creative works can be tendered and accepted as research. In reality however, most institutions do not accept practice-led research or design works to be submitted as research. As many still don't consider creative design works as being equivalent to rigorous, empirical research. Oswald and Williams (2008) state that on this matter, two divergent views hold in schools of architecture across Australasia. Firstly, there is the opinion that any creative work that is independently refereed or selected and presented in a curated exhibition is considered to be research. As such, a building design is not yet counted as research unless it is independently assessed and presented in an appropriate forum. Only in this context is it similar to traditional research in that only a peer-reviewed or refereed published work is counted as research worth tendering. But Van Leeuwen (2005) is of the opinion that creative work could be counted as research where the results of the work are published, albeit in a form that is different from the journal article or scientific monograph. The point nonetheless is that the work must still be published in some form.

Secondly, there is the other opinion that every completed building or approved design by virtue of having been vetted and approved by the appropriate authorities and been allowed to be placed in a public environment is equivalent to being peer-reviewed and as such be considered as research. However, this view is still considered in most quarters as similar to self-publishing, not having been subjected to rigorous peer-review other than the conventional check for standards, adherence to building codes and planning regulations. Still some scholars are seeking for ways to generate peer review systems that can recognize the legitimacy of such self-published works (Bacon 2006).

Besides these two divergent views, there are yet other arguments regarding practice-led research or design as research. One is the issue of innovation in design. This is where a building so designed incorporates an innovation in the use of horizontal or volumetric space, use of innovative building material, roof design, foundation design, water collection or disposal design, air-flow system, energy efficiency system etc. The argument states that where this innovation is entirely architectural and not engineering related, the design could be accepted as research based on the addition to knowledge content for the needs of the industry, commerce, scholarship and invention as earlier stated in the definition on research.

The need for accepting practice-led research was also emphasized by Bacon (2006) when discussing on journalism as research. The author argued that "if traditional forms of academic study become divorced from active practice, then there is a danger that university journalism will be seen as something apart 'from' rather than an integral part 'of' journalism professional practice". This same scenario could occur in the architectural discipline, if works in active practice are not tenable in the academia; the dichotomy of university architecture, seen as something different from professional architecture could result.

### **5.3 Peer Review, Evaluation and Assessment Techniques**

Assessments in the academia, whether for the purposes of scholarly publications, research grant applications, awards or as in the case of this study, promotions, are often conducted by one's peers. This is the process referred to as peer review. Cowdroy and DeGraaff define peer review as "an established component of professional practice, the academic reward system and the scholarly publication process" (2003:1). It is the process by which experts in a field assess the level of competence of their peers by appraising performance, creativity or quality of work published or otherwise presented. Peer review in the context of this study focuses on promotion decisions in tertiary institutions for which peers determine a person's suitability for promotion in rank by assessing and vetting their quality of work submitted. For every peer review process, Impartiality and Fairness are the most important values expected to be universally and consistently applied for the process to be deemed fair (Merton 1973, Tyler 2003). Where there is a violation of impartiality in the peer review process, bias is inevitable (Lee et al 2013)

Assessment methods should be consistent across board, not only for individual assessments but disciplines within the same field. For example, rules that apply for promotion assessments in disciplines in the creative arts and design field, should be fairly similar in criteria. Lee et al (2013) observed that some methods for evaluation or assessment are specific to disciplines and Lamont (2009) and Mallard et al (2009) also argue that evaluative criteria should not be subject to unifying trans-disciplinary interpretations. In essence, each field ought to maintain its own set criteria for appraisals that are consistent with their distinct structure, level of professionalism and creativity amongst other things. For disciplines in the design field, creativity is key and assessing creative ability is based on an understanding of the idea of creativity.

Brophy (1998) suggests that creativity is a multiplicity of notions. It commences from the initiating idea (concept) to the development of such ideas (diagrams, analogies), physical execution of the idea (activity of making) and the created products (design, product, built forms etc). As such, for creative works to be well assessed, the various stages before arriving at the end product have to be considered. In architecture for instance, the process of concept generation, crystallization of ideas, and development of form, design and actualization in built form or product will have to be taken into account where design is presented as research. This is what makes assessing creative works difficult, especially when assessing them as research.

Rendell (2004) examined the differences on how architectural research was assessed in two separate research assessment exercises held seven years apart. In both exercises, subtle but important differences in assessment criteria with respect to practice-led research were introduced. In one case, practice-led research was accepted by the panel but only as a full publication and in the other case, it required only a 300 word write up stating the contributions of the work to original research. The survey conducted after the exercises showed that the participants felt that the strengths of architectural design, especially practice-led design was not properly reflected or intentionally downplayed in favour of more traditional research. Gervis and Orcutt (2016) in a similar but more recent study examined the current tools used for assessing research in the arts and design discipline and concluded that the traditional citation-based instruments or parameters for research assessment do not do justice in highlighting the creative outputs of these design disciplines. As such, they advocate for a more holistic assessment model that takes into consideration various measures of impact and multiple research outputs.

In the following paragraphs, a few assessment models proposed by different scholars have been highlighted and discussed.

### **1. Authenticative Assessment Approach**

In the disciplines of architecture, design and fine arts, students and practitioners alike are often required to explain the intentions and ideas behind their works. This action has evolved over the years into the studio culture of crits or juries assessed or judged by panels. Cowdroy and Degraaff (2003) observed that creative practitioners in general prefer “to let their work speak for itself and be judged by others”. The authors also observed that internationally, the discipline assesses design using expert panels consisting of architectural academics and practitioners. As such, the idea of practitioners defending their works before a panel could be similarly adopted to allow the creative academic defend creative works to review assessment panels like those for promotions or awards. This would give them a chance to be better assessed after a fair hearing.

However, where members of the assessment panel are not made up of expert practitioners in that field, Cowdroy and Degraaff (2003) suggested that the creative academic should be allowed to be present at the assessment to defend the ideologies and concepts behind the product or design. The purpose is that the full import of the creative work can be understood and assessed accordingly. This requires a paradigm shift from the conventional blind peer-reviewed panel assessment method to an open defense panel assessment method, done in the spirit of fair play, transparency and research quality assurance. Cowdry and Degraaff (2003) have called this present and defend approach an “Authenticative Assessment”. Although, this technique was originally designed for assessment of students in the creative disciplines, it can also be applied to creative practitioners in the academia. The present and defend approach is where the researcher can be assessed on the basis of concept development, execution of craft and the final product. This ensures that all the multiplicity of notions of creativity as proposed by Brophy (1998) is comprehensively assessed.

### **2. Consensual Assessment Technique**

Due to the rather unique assessment concerns of practice-led researchers, Hennessey and Amabile (1999) discussed on the Consensual Assessment Technique (CAT). This is a technique used for the assessment of creativity in arts and aspects of product design. It relies on the independent subjective judgments of individuals familiar with the specific discipline or field in which the products were made. It is important that these individuals are familiar with the field, because to determine levels, quality and impact of creativity, it is appropriate that the creativity criteria for that area be laid out by the experts or those knowledgeable in the field. Bacon (2006) was of the opinion that assessment panels should be made up of people more akin to the professional area in question. The author also argued that this would enable professional practice disciplines in universities to develop their own forms of practice-based research and methods of assessing quality and social impact in ways that are beneficial to them. Unlike the authenticative assessment approach, the creative academic will not be required to present before a panel of experts but rather entrust the entire assessment process to the informed judgments of the panelists.

### **3. Exhibition Model of Evaluation**

Exhibition involves a public display of creative works in a recognized gallery, museum or event setting assessed by a panel of experts. A minimum of 10 works or images is often required for a solo exhibition or show and at least 20 or more for a group exhibition. Each exhibition ought to be accompanied by a catalogue of the works, an essay, as well as the CV of contributors where a group work is involved. There are several architectural exhibitions that take place either annually or biennially curating works from architects around the world. Each exhibition addresses specific themes using models, drawings and images. But with most of them being held in world class



galleries, museums or venues around the world, works from mainstream practices rather than those from professionals in the academia are curated for display.

The roles academics in the design disciplines play in exhibitions that can be subsumed under creative practice include; exhibitors, curators, catalogue essay writers and exhibition planners/designers. Any of these roles can be considered research under the ERA guidelines. Lys (2008) suggests that exhibition undertaken by design and visual art academics is in itself a research activity. Lyons (2006) also argues that exhibitions could be counted as publication. Yet, not every agency accepts exhibitions as research. Some studies have even shown that there are no commonly agreed criteria by which it can verify if knowledge presented in exhibition format is cognate with research knowledge (Niedderer et al 2006).

However, the exhibition of creative works has currently been recognized by four national research authenticating bodies in Australia, New Zealand, UK and South Africa as a valid method for peer review and evaluation of creative works as research. The Excellence in Research for Australia (ERA) made a clear distinction between what it terms 'traditional and non-traditional' research output types. Traditional research output types include books, journal articles, conference proceedings etc. while the non-traditional research output types include; live performances of creative works, recorded, rendered, curated or publicly exhibited works or events (ERA 2012, 31). The ERA 2012 submission guidelines 31, stipulates that for non-traditional research outputs such as exhibitions, the following must accompany the work;

- A statement addressing the research background
- The research contribution
- The research significance

In employing the exhibition model, the research significance is most relevant. Mehzoud et al (2012) stated that there are three pre-requisites for creative works to be assessed using the exhibition model;

- Meeting the definition of research
- Assurance of work's quality
- Public dissemination

Mehzoud et al (2012) observed that quality assurance for most frameworks or the assessment of the significance of the works is achieved by a high profile 'curatorial board' which for design related disciplines consists of 'peers with high standing in these fields'. This suggests that for an exhibition to count as research, it must be assessed by a committee of experts in the field, show research significance, outcomes and contribution to knowledge.

#### **4. Refereed Studio assessment method**

Another way it's been suggested that architectural design could be tendered as research and evaluated is through the concept of the refereed studio. The refereed studio is a process for critical review of works presented by students and tutors within the studio setting. This is an idea proposed by the Committee of the Heads of Australasian Schools of Architecture (CHASA). It encourages architects in the academia to submit theorized creative works, as well as innovative design studio works on the internet to a panel for peer review. CHASA encourages submissions in refereed studios to "articulate the intentions of the studio project and demonstrate the design studio achievements" (1996).

Bowring (1997: 54) in stating the criteria for refereed studio in landscape review suggested that for refereed studios:

- The clarity of objectives, relevance and insight must be clearly stated
- The creative and innovative process must be presented

- The outcomes must be coherent, original and fruitful

Interestingly, these sets of criteria as presented by Bowring are the same for what constitutes research rigour according to CHASA (1997) and Stafford (1997). Armstrong (1999) maintains that the accepted test for rigour lies in the peer review process as offered in the refereed studio. For refereed studios, creativity and originality are key components in design and this challenges positivist research views which suggest that the proof of validity and rigour is replicability. Friedman (1999) also opines that in creative arts and design, the strength of the research lies in the originality of the interpretation rather than its replicability. Harrison (1993) observed that in the creative arts and design disciplines, it is replicability and stereotyping that designers actually seek to avoid. Although, allowance can be given for creative art practitioners to be known by a particular style or develop a unique signature, it more than often does not amount to replicability except where repetitive works are deliberately made to be sold as copies or in case of architecture property development. Where this is not the case, stereotyping and replicability is often likely to be exposed through critical review as assessed during refereed studio.

However, many scholars argue that to ensure parity with other forms of research, anonymity in the peer reviewed process in refereed studio is essential (Armstrong 1999). This is at odds with other schools of thought who suggest that anonymity of both the designer and reviewers inhibits the achievement of a comprehensive review process in the creative arts.

Nonetheless, Armstrong amongst others strongly emphasizes the need for the refereed studios, arguing that they constitute a valid peer-reviewing technique which contributes to scholarly growth in the creative design disciplines.

## 6.0 DISCUSSIONS AND RECOMMENDATIONS

What this review has shown so far is the obvious bias that has existed towards practice-led research in creative art disciplines in favour of the more traditional or citation-based research. It reveals that some of the main reasons for this bias is the validity of the research in terms of quality assurance and rigour. The review has also emphasized the problems inherent in applying peer review techniques meant for traditional research in assessing creative works. In addition, it has examined the on-going taxonomical debate as to what constitutes research by design or practice-led research.

In addition, the study also shows some similarities in peer review and assessment techniques and the suggested promotion criteria from the survey by Archibong et al (2010). The areas with similarities include the use of oral interviews before promotion which is in line with the Authenticative Assessment approach. It involves academic practitioners defending their works before a review panel like those for promotions which would give them a chance to be better assessed after a fair hearing. This is where members of the assessment panel are not made up of expert practitioners in that field. Cowdroy and Degraaff (2003) suggested that the creative academic should be allowed to be present at the assessment to defend the ideologies and concepts behind the product or design. The purpose is that the full import of the creative work can be understood and assessed accordingly.

Another area where the Archibong et al's (2010) survey supports this review is in active participation of academic staff in professional body activities as an added criterion for promotion. For architects in the academia, this is synonymous with the production of creative works and engagement in practice-led research. It supports Bacon's (2006) conjecture that if traditional form of academic study becomes divorced from active practice then there is the danger that university professional courses will be seen as something apart from, rather than an integral part of a professional practice.

This review has further revealed the possibility that there is a paucity of knowledge amongst most academics involved in creative practice especially in architecture as to what practice-led research involves and as such, may not be engaging in practice-led research when carrying out creative works. Furthermore, the study has shown the lack of opportunities available for exhibition of architectural works to obtain valid peer review from expert panelists. Lastly, this review indicates that the Oceania region with Australia in particular is currently leading the way in studies, reports and discussion forums on research in the creative arts disciplines.

In view of the techniques mentioned above, this paper seeks to make the following recommendations that if adopted or implemented may ultimately enhance the wider acceptability of creative works and practice-led research as a peer assessment criteria in creative design disciplines.

1. In view of the possible lack of knowledge about practice-led research amongst academics in the creative disciplines, this paper recommends that further studies involving surveys ought to be carried out amongst this group. The outcome of these surveys may reveal the need for the organization of seminars and conferences on this subject.
2. The study shows that there may be a case for including the authenticative assessment approach in promotion peer reviews as suggested by Cowdroy and Degraff (2003) and supported by Archibong et al (2010). As well as the need for professional academics to engage more in professional activities as practice-led research as proposed by Bacon (2006). Nonetheless, there may be a need to undertake a more discipline-specific survey of academic staff disposition to promotion criteria in Nigerian Universities.
3. The study also shows a need for schools of architecture to own or support galleries or museums, as this will serve as hubs to foster practice-led research by hosting research exhibitions and curated works. An example of such arrangement exists with the SASA gallery domiciled in the school of art, architecture and design (AAD), University of South Australia. It enables creative design academics have the opportunity to curate, exhibit and catalogue works and expand non-traditional research output and impact. In this gallery, priority is given to exhibition proposals that focus on experimental and innovative art and design practice that demonstrate excellent research.
4. In addition, Schools of architecture can also produce publications and critical reviews such as the Architectural Association School (AA) in London and the RMIT in Australia. These institutions publish journals on creative works such as the AA files and KERB respectively.
5. Furthermore, this paper recommends an idea borrowed from Armstrong (1999) which suggests the need to have two categories of peer reviewers; those for critical design theory and those who exhibit scholarship in orthodox research and applied practice or practice-led research. This may become necessary as the adequacy of the current criteria for peer review in meeting the needs of the “rich scholarly development that is possible through creative works” is continuously questioned.
6. Research grants for creative works otherwise termed creativity grants should be set aside or made available to academics in the creative arts disciplines for the production of diverse creative works. As such, works like innovative building design projects, art projects, graphic designs and inventions amongst others would be eligible for funding under such creativity grants.

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