Cultural hybridity in the teaching of architecture within a decolonised society

FISHER, Roger C.[1]
LANGE, Mary E.[2]
NKAMBULE, M. Emmanuel N.[3]

[1]Emeritus Professor, Department of Architecture, University of Pretoria. E-mail: roger.fisher@up.ac.za.
[2] PhD Candidate, Centre for Communication, Media and Society, University of KwaZulu-Natal. E-mail: mary.lange@telkomsa.net.
[3]Lecturer, Department of Architecture, Tshwane University of Technology. E-mail: emmanuel.nkambule@tut.ac.za

Resumo

Descolonizar o ensino-aprendizagem em Arquitetura requer questionar o que é pertinente a uma sociedade multiracial, multicultural e multi-liguistica e ao mesmo tempo adequado a uma disciplina internacionalista. Examinamos conceitos de "descolonização" e "descolonialidade" em seu desenvolvimento, especialmente no hemisfério sul e como eles podem formar um contexto apropriado para refletir sobre um currículo de Arquitetura descolonizado. Também examinamos os conceitos de multivocalidade e inteligência múltipla para propor um quadro de referência para ensino na disciplina de Arquitetura, considerando o raciocínio visual como sua ortografia e lexicografia, atuando como uma língua franca pancultural adequada para o ensino nessa disciplina.

Palavras-Chave: Ensino de Arquitetura, descolonização, raciocínio visual.

Abstract

'Decolonising' architectural education raises questions as to what might serve a multi-racial, multi-cultural and multi-lingual society, yet remain fit for an international discipline? We examine concepts of 'decolonisation' and 'decoloniality' as they have evolved, particularly in the southern hemisphere, and how these might form an appropriate context for thinking about a 'decolonised' architectural curriculum. We also examine concepts of multi-vocality and multiple intelligences so as to propose a framework for teaching in the discipline of architecture, with visual thinking as its orthography and lexicography, serving as a pan-cultural lingua franca well suited for teaching in the discipline of architecture.

Key-Words: Architectural education, decolonisation, visual thinking.

1. Background

All peoples make structures. The seminal exhibition by the Museum of Modern Art in 1964, 'Architecture without Architects' (RUDOFSKY, 1964), highlighted the role of tradition and the vernacular in the legacy of the architectural discipline. Until the present day in South Africa, traditive or – in the title of the aforesaid exhibition 'non pedigreed' – architecture, in the local context, has remained the enterprise of anthropologists, ethnologists with only enthusiasts for the vernacular as recorders of its architectural merits. Indigenous knowledge Systems (IKS) in architecture still needs research so as to be formalised by architectural researchers and educators into a coherent body of understanding as part of the South African architectural discipline and systematized into teaching in the South African architectural curriculum.

In South Africa, when much was being voiced about free and decolonised education, especially during the #FeesMustFall campaign launched across the university campuses in 2015, certain students were raising concerns that higher education is not training and preparing them to participate in the economy through successful and sustainable entrepreneurship after they have graduated. Statistics South Africa in 2016 highlights that unemployment rate is at 26.6%. Those concerned view that a business start-up culture is necessary so as to ensure that university graduates become employers, job creators and as philanthropists become the funders of free education in the future. For them 'decolonized education' implies a curriculum that enables graduates to become leaders in expanding the economy and businesses, as well as the instruments for the efficient governing of the state. They question whether institutions of higher education should continue to train students to be productive employees forever caught up in negotiations for better pay.

Recent events on transformation, decolonisation and Africanization of higher education have dominated South Africa's mainstream media, dramatized by students' protests at the universities across the country. Discussions on these topics range across issues of access by Black African students to tertiary institutions of study to the representivity of Blacks on the academic staff at institutions of higher education. In discussions on pedagogy and epistemology, education funding has received the highest attention through the 2015 #FeesMustFall student-led protest movement in defiance to the instituting of fees increases for tertiary tuition. However discussions as to how to 'decolonise' and 'Africanise' the curriculum – and in particular the architectural curriculum – are still vague and rudimentary.

The relevance of architectural education in dealing with growing inequality and high unemployment rates in South Africa needs to be closely monitored. A majority of African students from poor households struggle to complete their degrees and become professional architects in minimum time, delaying their entry into industry and hence their ability to earn an income. This means the profession may not be a lucrative choice for African students who choose to be educated in the discipline of architecture as an escape from the poverty trap.

Certain Black African students, as was observed during the 2016 #FeesMustFall protest, have a sense that the contributions of Africans to universal civilization is widely marginalized in their teaching, excluded and even denigrated in the curriculum structures. Thus they call for the decolonisation of the curriculum. The question is "What should replace it and how should we think about this?"

We posit that the architectural curriculum, as a design-based discipline, with visual thinking as its lingua franca, needs this as a language for all the enterprises of the discipline, namely, history, theory, theory of structures and construction, and that if this curriculum is to be developed, the orthography of visual language needs to be researched and extended into the teaching of these aspects of the discipline, particularly in a pan-cultural and multi-lingual society such as South Africa. However this essay investigates aspects of the 'Why?' and only touches upon the 'How?', a topic for future discussion and elaboration.

2. Decolonisation and Decoloniality

South Africa, as a post-colonial society and a young fully enfranchised democracy achieved in 1994, is in a process of re-inventing itself and thus has moved away from a post-colonial theory in academia and education to 'decolonisation' theory and 'decolonial' reflection and action (praxis).

To understand 'decoloniality' one first needs to understand 'coloniality'. 'Coloniality' is described by Sabelo J. Ndlovu-Gatsheni (2013) as:

> a power structure, an epochal condition, and epistemological design, [that] lies at the centre of the present world order that Ramon Grosfoguel correctly described as a racially hierarchised, imperialistic, colonialist, Euro-American-centric, Christian-centric, heteronormative, patriarchal, violent and modern world order that emerged since the so-called 'discovery' of the 'New World' by Christopher Columbus. (NDLOVU-GATSHENI, 2013, p. 11)

The academic debate on 'decoloniality' (as it is conducted in Post-Modern academia) is not restricted to being addressed in only academic publications but is apparent in the public and electronic media such as newspapers and internet sites. As in most areas of research and academia, jostling for priority and dominance in this academic endeavour is apparent. An example of this is the right to be the first to 'coin' a term. Another field of debate is whether the South Americans or Africans were the first to introduce 'decoloniality' into the world of academia. Cetshwayo Zindabazezwe Mabhena (2016) argues in a newspaper article that 'clever right wingers' try to limit 'decoloniality' to a 21st Century South American movement when the term 'coloniality' was used in Peru by the sociologist Anibal Quijano. Mabhena argues that:

> Well before Anibal Quijano, Kwame Nkrumah described neo-colonialism, and well before Kwame Nkrumah, Cheik Anta Diop wrote of African origins of civilization and the attempt by Europeans and Americans to silence African histories and cultures. (MABHENA, 2016)

Mabhena's (2016) broad description of 'coloniality' is however inclusive of the Global South and it is noteworthy that whereas Ndlovu-Gatsheni refers to religion in his description of 'colonialism' Mabhena refers to spirituality:

> coloniality refers to the endurance of the effects of slavery, colonialism and apartheid long after the abolition of slavery and the overthrow of colonial and apartheid regimes in the Global South. These effects of imperialism are felt in the economies, polities, cultures, spiritualities and academies of the Global South. (MABHENA, 2016)

'Decolonialisation' as the 'thought' and 'decoloniality' as the 'praxis' are defined by Mabhena in his critique of the 'demise' of 'decolonialism' as promoted by Aime Cesaire in the global south in the 1950s at the Bandung Conference of 1955 and its resurrection as 'decoloniality' in southern Africa in the 1990s (MABHENA 2016, MIGNOLO 2012). 'Decolonisation' Mabhena (2016) defines as "the process of not only unmasking but dethroning coloniality itself, killing the ghost of colonialism" whereas on 'decoloniality' he writes that "Ramon Grosfoguel has emphatically explained on behalf of the Decoloniality Movement, the aspiration of decoloniality is to champion anti-systemic thought and politics that goes beyond simple identity politics".

In relating coloniality and 'being' Nelson Maldonado-Torres (2007) states that:

> Thus, coloniality survives colonialism. It is maintained alive in books, in the criteria for academic performance, in cultural patterns, in common sense, in the self-image of peoples, in aspirations of self, and so many other aspects of our modern experience. (MADONADO-TORRES, 2007, p. 243)

Mabhena also supports the inclusivity of 'decolonial' thinking by listing white philosphers and theologians across the globe and including South Africans who 'have acquitted themselves well as thinkers in decoloniality" (2016). Mabhena (2016) further emphasises that: "Decoloniality is ranged against the usability of the classification of human beings according to differences of race, tribe, nationality, gender, sexuality and ability of body. It is not a stick for beating up whites but a spirited search for liberation".

Decoloniality "as a political-cum epistemological

liberatory project" aims to unmask and resist coloniality (NDLOVU-GATSHENI 2013, p. 12). This is promoted as being apt for the restructuring of academic institutions, curriculum, and research approaches thereby promoting empowerment and turn around the hegemony of the western thought and practices in academia and thereby redress the injustices of its past. Decolonisation was unsuccessful and in its wake coloniality continued. It is argued that there are no African universities as they, as with schools, churches and colleges, are considered institutions that perpetuate colonial agendas (NDLOVU-GATSHENI 2013). In South Africa, transformation in academia and academic institutions in the 2000-teens is predominantly based on the Decolonial Paradigm and related theories and philosophy.

Various far-reaching changes to South African legislation have impacted both on the teaching and practice of architecture. In addressing the entrenched legacy of Apartheid in education the objectives of the educational regulatory framework were changed so as to be able to assess learner outcomes as regards their achieving the objectives of the particular phase of study – called Outcomes Based Education (OBE) This has subsequently been revisited and revised.

In South Africa the architectural curriculum has had and still has to adapt to these changes. However the discipline of architecture is inherently conservative and any changes to its teaching constrained by its international traditions, conservative attitudes and inertia in bureaucratic systems.

3. Identity

'Identity', as proposed by Cultural theorist Stuart Hall, is fluid and not static. It is politicised and considered as not being determined by the individual as subject, but rather by 'difference' as ascribed by the objective 'onlooker' (HALL, 1992; LANGE AND DYLL-MYKLEBUST, 2015). Hall proposes a pluralised or shifting constructivist element of 'identity' that is influenced by exclusion and that "the constitution of a social identity is an act of power" (HALL 1992; LACLAU 1990). Here Stuart Hall's notion of

'identity', as influenced by "modernisation and globalisation", is "'pluralised', dynamic and constructed" (HALL, 1992, 1997; NICHOLSON, 2009b; LANGE AND DYLL-MYKLEBUST, 2015). Hall (1992, p. 287) suggests that we should think of 'identity' as incomplete and that therefore the term 'identification' is more appropriate. Identity is therefore not fixed but the previous concepts "dispel the idea of a single identity and rather promote a sliding between different identities determined by context" (LANGE AND DYLL-MYKLEBUST, 2015). Also, valid from Hall's (1997) theorising on Caribbean identities is that the relationship between "some grounding in, some continuity with, the past". This is due to disruption by traumatic events such as slavery or colonisation or apartheid.

The impact on globalisation on Africa and subsequently identity has led to "pluralistic or multicultural societies" (MANWELO, 2011, p. 105). Identities based on tribalism or ethnicity can lead to social unrest, therefore Paulin Manwelo (2011) has called for a new identity of 'citizenship' which defines identity in relationship to both 'particularities' and 'common bonds': 'Citizenship' identity includes "the capacity to identify with others and to act in unity with them for the common good for a better society". The concept of 'liberal-communitarian citizenship", it is argued, is not enough and that "citizenship education initiatives in South Africa need to promote a sense of compassion, motivating learners to take seriously the suffering of others". It is further argued that "such compassion represents a precondition of genuine educational transformation."

This echoes the ethics of African 'Ubuntu' (SHUTTE, 2001; NUSSBAUM, 2003) and the principles of 'Batho Pele' that are promoted in South Africa (WHITE PAPER, 1997; MASOGA & KAYA, 2013; LANGE AND NGEMA, 2015). It also shares concepts with Freirean conscientisation and traditional religious and Marxist spirituality that promote working morally and ethically towards the greater good of society (FREIRE, 1970; BOYD, 2012; LUNDSKOW, 2005). The complexities of oppression are glossed over in critical pedagogy whereas Brazilian educator

Paulo Freire's, Liberatory Pedagogy fosters the recovery of both oppressor's and the oppressed's "lost humanity" (CHINYOWA, 2013, p. 15). Freire's Liberatory Pedagogy is not just recognised by Chinyowa as relevant in a post-apartheid South Africa but he is also recognised by Mabhena for his role in decoloniality. Mabhena states that Freire, ''a white Latin American, represented a decoloniality that valorised liberation and the humanisation of both the oppressor and the oppressed'' (MABHENA, 2016). The dominant education 'banking model' whereby teachers deposited knowledge into passive pupils was challenged by Freire's call for a critical consciousness or conscientization whereby "men and women develop their power to perceive critically the way they exist in the world with which and in which they find themselves; they come to see the world not as a static reality but as a reality in the process of transformation." (FREIRE, 1970; CONRAD, 2004, p. 5). He called for the dehumanizing system to be challenged and for the oppressed marginalised as 'human beings to take an active role in their lives' through reflection and action (praxis) and thereby be empowered (FREIRE, 1970; CONRAD, 2004, p. 5). In practice a Freirean approach makes use of 'critical dialogue, reflection and problem solving' and 'draws on and validates learners' knowledge in the production of new knowledge' (FREIRE, 1970; CONRAD, 2004, p. 6).

A post-critical Freirean pedagogy can address binary identities and deconstruct them "through lived experience" in the same way that they were "socially constructed" (CHINYOWA, 2013, p. 15).

4. An Understanding of Culture

Culture, in a similar way to that of identity, is therefore seen as fluid and organic. Hall, from the perspective of a practitioner in Cultural Studies, focuses on power and agency as he promotes 'culture' as defined by 'shared meanings' as encoded and decoded within specific contexts (1992). Hall's (1992, p. 310) concept of 'cultural hybridity' refers to people who live between several cultural homes, having had to renounce any dreams of 'cultural purity or ethnic

absolutism'.

In understanding the term 'culture' Fisher (1992) offers the following insights. Culture can be seen to be uppermost in the hierarchy of systems of evolution, and the artefact the agency of communication within the cultural system. The artefact as with the gene in the chromosome for the biotic world, the molecule in the compound for the physical world, the atom in the molecule for the material world, and so forth, is an ecological agent within the cultural system. It is the medium by which memes are transmitted within the cultural pool. The artefactual residue of our culture gives us proxy to experiences in the past even though we are absent from the event. It is the extension of the present into the reaches of the dimmest past of an emergent human intellect. The agency of the meme is not through our bio-physical selves but our presence in and receptivity to our cultures. Hence the linearity of genetic inheritance is circumvented and culture, as a complex and circuitous (synchronic) system of interaction and feed-back, is thereby freed not only from our direct, hence linear (diachronic) biological inheritance but also from the immediate present and from the limitations of having to gain only from directly experienced events.

Buildings and structures, as the most enduring composite artefacts and hence multiple meme-bearers, are thus of the most important meme transmitters in the cultural system. The teaching of architecture requires and refers to these edifices as meme bearing, hence meaningful, products of cultures both past and present. In teaching the discipline of architecture these artefacts remain of our most important primary source material.

5. Lessons from Biesje Poort

Two of the authors of this paper (Fisher and Lange) were privileged to be part of a team of researchers that was to document a remote and desolate engraved rock-depictions of the stone-age cultures of southern Africa (LANGE *et al*, 2013). The research group was a multi-cultural, poly-lingual, pan-educational, multi-disciplinary and cross-institutional team. There was no lingua franca. The levels of degrees of education

were from Grade 8 (Standard six) to post-doctoral students and professors. The expertise ranged from game spoor tracking, traditional healing, landscape architecture and post-structuralist theoreticians. The cultures represented were Afrikaans speakers, Nama speakers – some of them Bushman/San ['First Peoples'][1], isiZulu speakers, setSwati speakers and English speaking British descendants. The institutional affiliations were from none, other than being 'First Peoples' of the local inhabitants, to Museums and Universities (MAGONGO, 2013). Power relationships of knowledge and authority were fluid in a harsh and – to most of us – unfamiliar landscape. There was also the production of 'inter-subjective' knowledge through joint activities such as the recording of the engravings, the naming of new engraving sites and the writing up of the research in a book (MAGONGO, 2013, p. 94). This inclusivity of activities within the project 'reduces the likelihood of *a priori* privilege where one form of knowledge is considered more complete or more appropriate (MOHAN, 2001; MAGONGO, 2013). This diversity of knowledge partnerships within a participatory communication approach that includes critical dialogue is argued by one of the communication student participants, Miliswa Magongo, to have 'provided a stronger case for knowledge sharing and application' (2013, p. 94). The subsequent dissemination of the project in a book that reflected the thoughts of the diverse participants of the project and used 'heritage as a conversation piece while bridging gaps in knowledge, social status, gender and socio-economic status' argues rock engraving expert Sven Ouzman (2014) that 'Simply getting people to engage; understanding that knowledge is different, contextual but still communicable, helps build a robustly critical citizenry'.

 Storytelling as a methodology was used to 'humanise and empower' as divisions between 'learner' and 'instructor' were 'blurred' (DYLL-MYKLEBUST, 2013, p. 85). Storytelling as an oral literary intelligence (in combination with other intelligences) is an integral aspect of knowing and knowledge specifically in Southern Africa (LANGE, 2011). The sharing of personal narratives as with rituals joins 'our sense of who we are' and 'invites us to discover how our life and its tribulations are part of the story of all life. In this we find instruction and solace.' (MC KERNAN, 2005, p. 8). Having the engravings as focus helped create common cause and bonding. We relied on the indigenes to 'read' the landscape' and help locate the engravings, the traditional healers to read the natural environment, the museologist to direct the recording of the engravings, and the landscape architects to locate these readings in broader and universal understandings. Those representing the communication and media disciplines helped facilitate interaction, reflection and provoking and recording discussion (MAGONGO, 2013; DYLL-MYKLEBUST, 2013).

A personal insight and understanding we gained from all this interaction of peoples in 'space without architecture' was the commonalities of human experience and cultural endeavour. Architecture as discipline, in essence, taps into this commonality and this understanding has informed the authors' thinking about the teaching of architecture, and in particular how the architectural curriculum might be structured.

At the core is an understanding that in essence, we are all 'First Peoples' (FISHER, 2013). This is not to say we support the Enlightenment idea of the 'noble savage,' 'primitive hut,' 'Arcadian landscape,' or 'sublime aesthetic' of 'nature untamed'. These are of the same school that would proclaim that as Shelley proposed 'we are all Greeks' (1821), a Western, and specifically Euro-centric idea taken to the colonies or cultures where western hegemony holds sway, and particularly influential in the teaching of architecture.

By 'First Peoples' we mean that we understand that we all share the same instincts, drives, innate intelligences and means of engaging each other and the physical world, a desire to discover and imbue reality with purpose and meaning, and have as our legacy for the future evidence of our presence in the present and our inher-

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[1] See:
http://www.chr.up.ac.za/chr_old/indigenous/country_reports/
Country_reports_SouthAfrica.pdf

itance of the past.

6. Multiple Intelligences

Once we have understood the aforementioned concept we need next to understand that there are many or multiple intelligences (GARDNER 1983, 1999). Howard Gardner in 1983 challenged the traditional western narrow method of testing intelligence that focused on the logical-mathematical and literary linguistic thereby disadvantaging the oppressed, whether due to race or class. Gardner (1983) therefore proposes seven Multiple Intelligences. These intelligences included a musical-rhythmic, visual-spatial, verbal-linguistic, logical-mathematical, bodily-kinesthetic, interpersonal, and intrapersonal. Gardner's attempts to bridge race and class were challenged as they were considered culture bound due to him not including sense intelligences such as taste and smell (HOWES, 2005; GOLDING, 2016).

Gardner (1999) in the 1990s added a 'naturalistic intelligence' to the previous seven intelligences: "Naturalistic intelligence allows individuals to identify and distinguish among products of the natural world such as animals, plants, types of rocks, and weather patterns". Although Gardner posited the possibility of an existential intelligence that "reflects an individual's capacity for considering 'big questions' about life, death, love, and being", he did not add it to the list due to an inability to verify it as an intelligence to the criteria used for the previous eight intelligences (GARDNER, 2006b; DAVIS *et al*, 2012). Other learning theorists have subsequently proposed a further intelligences based on Gardner's criteria in the form of a spiritual intelligence but Gardner preferred the possibility of an existential intelligence (EMMONS, 2000a; KING AND DE CICCO, 2009).

These intelligences are often distinct but complementary and are all necessary for a fit and functioning human culture. We express these intelligences in many ways and through many voices, or multi-vocality, and through different cultures and disciplines. This thinking is based on an epistemology that advocates that there are multiple ways of knowing: "this is about per-

ceiving and understanding ourselves within our environment", and knowledge: "this is about being able to communicate the knowing (this is making it public)" (GURM, 2013, p. 2). This means that not only the empirical is considered valid but that "the narrative and reflective" are also considered important as has been highlighted in nursing and educational studies (GURM, 2013, p. 1). Human culture is the whole of these diversities and disparities.

And architecture must reflect this.

If architecture is to reflect this then how should architecture be taught?

7. Hybridity as Driver in the Architectural Curriculum

To say that South Africa is a mix of race and culture would seem to state the obvious. But it is a very particular mix. Of these cultural mixes are the creolized cultures, others that have taken on distinct yet individualized identities, particularly that of white English speaking, white Afrikaans speaking, and black 'nations' such as isiZulu and isiXhosa speaking in particular because of geography, language and past political ideologies and religious injunctions against miscegenation. Ironically, considering the Decolonial emphasis on absence of 'race' as identity, these divides are re-enforced through current politicization of 'racial identity' as part of a process of 'redress', 'restitution,' 'representivity' and 'empowerment', all of which require the perpetuation of racial alignments which in turn promotes association with distinct cultural identities.

The universities are required to actively promote admissions to coursework in terms of the representivity of the intake of students into programmes. While the intake of black students has increased over the twenty-plus years of full democracy, attrition amongst Black African students seems to be greater than that of other 'races' or 'cultures.' The other problem is that not only does the pool of African Black students diminish as the years of study progress but after achieving the first degree the market-place is so needy of African Black representivity in architectural practice that the numbers who return for full professional qualifications at post-graduate level

is even more limited.

That is the negative side of the coin.

The positive side – not yet fully explored by academia – is that cultural diversity offers opportunity to enrich the curriculum – in terms of our title and argument – bring hybrid vigor to architectural education.

8. Transformative Architectural Education in South Africa

The growing number of Black South African students enrolling at South African institutions of higher learning is an indication that education could be perceived as a way of getting out of the poverty cycle instigated by Apartheid's policies (GOVINDER, ZONDO, & MAKGOBA, 2013, p. 3-4). This could also be an indication that access to educational opportunities for African Black students has significantly improved since the democratic elections in 1994. The State's incentives to encourage institutions and private sector organizations to participate in the economic empowerment of previously disadvantaged groups might also be paying off. However, the Department of Higher Education, as indicated by the Council on Higher Education (2013), seems to be fixated on just the growing numbers of black students successfully completing their degrees to be assimilated into industry and not much is discussed about the role they play in creating employment opportunities.

With a growing public sector mainly composed of Black African workers and dwindling private sector economy, mainly controlled by people of European decent (BHORAT, NAIDOO, OOSTHUIZEN, & PILLAY, 2016), the longevity and resilience of Black African participating in the private economic sectors and the effectiveness of the African National Congress (ANC) government is under scrutiny. There is a grouping within the African population that prefers to earn their success through hard work and competitive entrepreneurship efforts rather than solely relying on state interventions. This should be considered when addressing transformation in architectural education and practice. Transformation in the South African context implies addressing and redressing socio-economic dep-

rivations caused by Apartheid by enabling reasonable representation of Black Africans in all levels of development.

The teaching and practice of architecture could be something far-reaching than just the making of buildings (PETERS, 2012). A systems-thinking architectural design approach provides alternative strategies for dealing with poor socio-economic conditions. It could be a means of providing solutions in third world countries' economies, cultivating micro-scale economic activities rather than merely serving large corporations. Architectural research has the potential to foster the 'creative economy', more importantly in communities plagued by poor socio-economic conditions. In this way architecture becomes an avenue of honing skills, ideas and convictions about why and how one lives, creates value and do things for others. In communities where the system of economy has broken their traditional ways, the teaching and practicing of architecture should be revisited. Pedagogical architectural inquiry in to how to cultivate a culture of entrepreneurship is called for in third world economies.

9. Communal – Individually Centred Learning

The revision of the architectural curriculum should address the identities of all races and cultures because the identity of students lies in uncovering the story of their ancestry. The pedagogical model in architecture schools is a combination of certainty and uncertainty. Similar to the Visual Arts, evaluating the portfolio of students is challenging because at one end an examiner must attempt to measure a creative output while at the other extreme assessing their written texts (DUXBURY, 2012).

Developing visual communication in the discipline of architecture offers opportunity for a lingua franca that can facilitate multiple intelligences. The limitations of verbal communication in infusing multiculturalism may be overcome by visualization. This is significant in the development of an architectural epistemology and pedagogy in a multilingual and multicultural society like South Africa. Individual and group storytell-

ing become possible, the story passed from parent to child down the ancestral lineage. Gardner's (1983) multiple intelligences theory is realisable by respecting the rights of individuals without destroying group identities. People are what they remember and the epicenter of education is the transmission of these stories, which embody cultural and disciplinary values. Developing visual communication as a teaching medium has the potential to make most of the modules in the discipline accessible to students of different backgrounds, ethnicities and languages. The developing and mandatory teaching of the visual sign language, as a lingua franca, in basic and higher education has the potential to improve access and effect transformation as recently voiced out by Deaf Community of Cape Town (MAGLAS, 2017).

Perhaps, architectural visualization and space-making tools and techniques may be used to investigate productive and propagative systems of the creative economy: manifesting in society, space and time. As such, architecture is not just the production of buildings but a means to an end: a visual way of thinking, asking and answering questions and communicating about the making and improvement of systems for the betterment of society. Visual thinking has the potential of reinforcing focus, increasing memory, improving communication, promoting collaboration and cooperation and enhancing creativity (GRANDIN, 2009).

The tenacity to solve problems, question the status quo, always questioning but never accepting answers and making a better world is the heartbeat of creative economies. Architectural teaching, training, research and practice encourage students to be inquisitive in a way that enables the production of innovative ideas. In the discipline of architecture, new knowledge produced through visual research methods should not be undermined by orthodox ways of researching. Design research can provide a platform for the development and distribution of indigenous tacit knowledge systems, which would have been otherwise excluded if scholarship remains restricted to traditional research practices. Strategies and models of research for

the creative economy systems should be developed by harnessing the unique languages that are specific to the discipline of architecture, in particular visual literacy for design thinkers. In promoting the use of this as the primary language as teaching medium and lingua franca ensures that, while drawing of the innate intelligence, world and abilities of the individual, it equipes them to operate as participant in the universal language of architecture.

The requisite characteristic of an architect is to be empathetically objective – to be able to understand their client without necessarily being of the same persuasion, culture or belief as they. A culturally and racially diverse class offers opportunity to explore differences and commonalities as part of the learning experiences.

Answering and sharing with peers questions such as

- Who are you?

- What do your names mean?

- Where does your surname come from?

- Who are your parents and where do they come from?

- Who are your grandparents and where do they come from?

- What are the creation legends of your culture?

- Can you associate any structures or places with your faith?

- Can you represent one of them?

- Can you name the parts of which it comprises?

- Do you know another name from another culture for that same part?

If not – check if one of your peers does, and suchlike.

There can be no right or wrong to these questions. It creates equality and commonality in the group and does not valorize any particular body of knowledge or culture or their endeavour and empowers the knower to draw on their own frame of reference and value what they know. But through the process of naming and looking for alternative names starts a process of engag-

ing with the discipline of architecture as a repository of tradition and with its own vocabulary.

Having explicated their own world as core foundational knowledge and as key and entry to the discipline of architecture they can then begin to explore and understand and discover the legacy of their immediate physical surrounds.

Debates around the issues of curriculum change during the #FeesMustFall protests at the Department of Architecture at University of Pretoria touched on the question of identity and representation. Some of the African students in the field of architecture raised questions about orthogonal representation, asking if this does not limit a student from expressing their cultural perspective about architecture. After all, each student is what he/ she remembers, ascertaining their identities in the process of telling their stories through a variety of visual mediums thus permitting multiple intelligences.

The campus buildings of the University of Pretoria offers a blend of architectural episodes of over more than a century. Its buildings range through eclectic style-revivalism of the early twentieth century, through early modern to post- and neo-modern with more-or-less overt regionalist variations. In having neophyte students discovering, representing and naming these, their parts and their architectural legacies it starts taking the student into the realm of the archive of knowledge of the discipline and connecting them to the more abstract thinking and repository of the discipline – the 'archive' by having their immediate academic environment as a laboratory. This also sensitizes them to treating all built environment as an extended laboratory.

Questions such as:

- Can you represent the building?
- Can you name its parts?
- Can you find an alternative name in your own/ another language?
- Can you represent the systems of geometrical organization of its plan/ its parts?
- Can you identify similar examples from another culture?
- Can you identify its ancestors?

All these provoke engagement and discovery.

Along the way the student should be developing both representational skills, the skill of abstracting concrete form into underlying essences and an architectural vocabulary.

Technology, construction and theory of structures with its associated mathematics remains a challenging field, and one in which neophyte architectural learners, and particularly those of indigenous cultures struggle.

We are of the opinion that if the student has been selected into studies because they display the requisite qualities of an architectural intelligence then their failure is a failure of the system and/or the curriculum and not an innate inability but a disjuncture between the way information is given and expectations of how it should be embodied and re-presented.

This is where we believe the skills of visualization, representation, graphical analysis and descriptive geometry are an essential asset. Graphics is the orthography of the language of architecture and building components its lexicography. As with the discipline of architecture graphic visualization is a non linear logic and degrees of representation allow the range of thought from 'fuzzy' conceptual through with multiple connections, which is suggestive rather than exact, hence predictive and prescriptive of its resolution, through to precise representation for fabrication, production or construction. This language speaks to a multiplicity of audiences, engages a diversity of subjects across the divide of the spoken and written languages. Hence it is a language specific to the discipline of architecture. It is very 'old school' on the one hand – see for example old carpentry handbooks – but on the other a neglected area of intellectual engagement as a tool for educating 'multiple-intelligences' where that intelligence is visually rather than abstractly informed. Up until now we have not yet discovered a helpful, guiding or convincing text which builds on this opportunity and would implore our colleagues to do so!

When it comes to architectural 'theory' we are of the opinion that the discipline of architecture has been hi-jacked by the academic factory in order to serve its own purposes of 'knowledge production' and that forays into other disciplines such as philosophy and literary studies have generated a vast body of meta-studies that use the discipline as area of engagement in order, not to inform design thinking, but academic production. This has not served the discipline well. With the teaching of architecture embedded in academia this has removed its knowledge base from architectural production to abstraction. It has also set up those culturally remote from these areas of knowledge-production for failure. If we are to inform the design-mind then we need to return to what it is designers need to know in the abstract realm and how this might be applied in the practice of architecture. These areas of knowledge are well-known, well recorded and quite teachable – scale, proportion, colour, texture, hapic qualities, precedent, context, meaning and such like. Dragging young minds into the quagmire of fashionable contemporary abstract thought founded in other disciplines and derived from foreign tongues in translation, where English is a second or third language to most of these students, is to sow confusion and promote failure. We do however believe that to engage ideas of Decoloniality and creolization will ally them with the politics and thinking of these societies where they might find commonalities and that this as academic pursuit in the discipline of architecture will help ground and create a compatible frame of reference for this generation.

Curriculum revisions in the architectural education are key to promoting diversity, inclusiveness and multiple intelligences. The curriculum should include previously disadvantaged and marginalized groups and their contributions to modern civilization so that students of all races may be aware of the collective efforts of their ancestors. For instance, Africans who made significant historical and contemporary contributions to civilization, education, science, literature, architecture should be included in the curriculum. This also means African students can be exposed to fellow Africans who are role models in their respective disciplines and professions.

Because of the fluid nature of architectural design the applying of the previously entrenched outcomes based educational model in studio-centred teaching has been a daunting task (BHORAT *et al.*, 2016, p. 15). Some architecture schools, such as the University of Pretoria, when doing assessments, reward students for improving their portfolio during the course of the academic year. Therefore, if the end of year exam design portfolio of a student is better improved, resulting to a higher mark than portfolio of continuous assessment or year mark, the year mark is then superseded by higher mark. The intention is that a student is not punished for 'mistakes' made by attempting something new but rather is encouraged to learn and improve from mistakes. This teaching and assessment approach is fundamental in instilling an entrepreneurial spirit in students. A further development of this approach may take the form of on-going life-long or long-term learning and research portfolio through distant or online and face-to-face interactions with mentors, teachers, experts and peers from a range of disciplines (JARVAS, 2009).

Perhaps the objectives of architectural graduates being successful entrepreneurs and business leaders who can empower the uneducated and re-invent the South African economy as we know it should be captured in South African's Higher Education Qualifications Sub-Framework by the Council on Higher Education – CHE (2013) and the Level Descriptors for the South African National Qualifications Framework by the South African Qualifications Authority (SAQA).

Perhaps, if the current curriculum explicitly highlights the contributions of Africans then these students would see themselves as part of the collective scholarly community, not merely recipients of colonial education.

Since the identity of students lies in uncovering the story of their ancestors this can be easily addressed in history and theory coursework rather than in the scientific and technical subject

matter.

There is thus work to be done!

10. Deductions

Architecture as discipline has long traditions and its artefactual residue rich in information.

The body of knowledge of the discipline is well formulated and well-articulated in seminal texts.

This body of knowledge needs to have ownership by all cultural groups in a way that facilitates accessibility, empathy and sharing.

The embodied knowledge and intelligence of the individual must be privileged in their quest for accessing the body of knowledge of the discipline.

The curriculum must engage aspects of multi-vocality and multiple-intelligences in order to facilitate learning in a culturally diverse society.

Aspects of individual-centred learning in a multi-vocal and multiple intelligent cohort must be peer related and shared. Here the studio is an essential and irreplaceable classroom as being supportive of the individual-directed teaching in a communal learning environment.

Academia must engage, foster and become the repository of these multi-vocal aspect in the local practice of the discipline.

Academia must develop and foster appropriate vehicles by way of 'text' and exercises to foster a lingua franca for the discipline of architecture which has visual thinking at its core.

The physical built environment which the student can directly engage, analyze and represent should take precedent over language based text and abstract theory as medium for engagement and learning.

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