

Horizons and Conscience

A Qualitative Study of Designing for Student Life in Africa

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At no other time has a student's knowledge of the world seemed greater and that same world seemed smaller than now. Their global awareness and ethical perspective have developed throughout childhood thanks to education, digital communication and access to international travel. Can meaningful work and geographic and cultural variety satisfy their outward and inward gaze? Is this the deeper motivation in joining a school of architecture? As they imagine their future, how can we help them put their values into practice and reinforce their belief that others' lives can be improved through their agency as an architect? This paper explores four phases of an ongoing internationally collaborative live project between The Mackintosh School of Architecture at The Glasgow School of Art in the UK (MSA) and The School of Architecture and the Built Environment (SABE) at The University of Rwanda (UR).



INTRODUCTION

Educating students to become citizens as well as professionals would enable them to prove that both school and profession have not outlived their usefulness. (Gloster, 2015)

The illiterate of the 21st century will not be those who can't read and write, but those who can't learn, unlearn and relearn...Alvin Toffler, "Rethinking the Future" (Toffler, 1970)

What kind of a world does an architectural student imagine as they look beyond the Academy towards their future professional life? What horizons can they see which we instructors cannot? Does that picture engage their moral compass, tracking the pressing contemporary issues from planetary environmental crisis to the fragility of the Global South? How different is that perspective if they are a student in say, Europe or a student in Africa? When their own future is unclear, how can they design the human future for others? This is reality for the emerging student generation. At no other time has a student's knowledge of the world seemed greater and that same world seemed smaller than now. Within this vortex of positive and negative influences, there is, we believe a sincere search by them for personal values and identities as they search for a way to work within the world they inhabit. How do we help empower students of architecture to address the challenges of their future?

Such strong external global drivers shape their consciousness and values. "Horizons" could be seen as the sixth thematic area of this EAAE conference which seeks to identify the 'hidden school' beyond the curriculum. "Horizons" is didactically linked to "Conscience"; the former involving looking outwards and the latter involving looking inwards. Academia has an important responsibility in stitching these together by compelling us to look both outwards and inwards concomitantly. Outward and inward looking encapsulates the very essence of being human. What meets the outward and inward gaze of our students?

The authors of this paper believe that when students are able to apply ethics within their chosen discipline, a transformation occurs from 'profession' to 'vocation'. How can we nurture ethical practitioners who are inspired to make their world a better place through their chosen discipline? Is the answer simply to experiment with educational initiatives which require students to respond in ways that are beyond a traditional academic curriculum? Mary Colwell makes an eloquent and powerful plea when she writes,

“We urgently need engineers of the soul — men and women with the skills needed to build bridges from our inner, secret lives to the hard realities of a climate-stressed world...” (Colwell, 2019)

This paper explores four phases of an ongoing internationally collaborative live project between The Mackintosh School of Architecture at The Glasgow School of Art in the UK (MSA) and The School of Architecture and the Built Environment (SABE) at The University of Rwanda (UR). The project’s ambition is to provide a transformative vehicle for students by using a collaborative model for the design and procurement of barrier-free student hostel accommodation in Rwanda. Through this project, students from MSA and UR are identifying the ideal conditions for participatory design, practice-based research and a procurement process which accommodates the highest standards of user-informed design. It also aims to highlight a ‘bottom up’ student-perspective exploration of the issue of hostel life. Similarly, the research focuses on the student’s conscience and horizon, rather than the educational instructor’s. We hope this helps to bring out originality and value to the research.

Several narratives have been collected from Rwandan staff and students, who for their first time have had the opportunity to participate in a live project through a Global North/South collaboration. Participating students have had the opportunity to reflect on their own personal experiences of accommodation options related to their academic journey. It is against this backdrop that the excitement and celebration of a new process of participatory design and innovative procurement of the hostel project emanates. Indeed, the project aims to explore how architecture students can better address the lives of clients, including campus hostel dwellers and what anthropological insights and methods could contribute to our (staff and students’) deeper understanding of the hostel phenomena.

As a result of engagement with this project, further narratives are emerging from the University of Rwanda’s senior management, who believe that any forthcoming infrastructure project in UR ought to be state of the art and inclusive in design. Similar initiatives to rehabilitate classrooms in Nyagarate campus and recreation facilities in Rukara campus are ongoing. The University Vice Chancellor sees the barrier free hostel project as an expression of the values of the Institution, which aspires to be fully inclusive by giving all learners every opportunity to reach their full potential.

WHY LIVE PROJECTS?

Almost all European and US schools of architecture are involved with what, within academia are generally known as ‘live projects’; i.e. projects which are typically executed outside the Academy and which are “... *defined in terms of students experiencing not actual construction but a working relationship with an external client...*” (Brown, 2014) The ambition of such projects is often to expand the student’s pedagogic experience by moving (literally) outside the hothouse atmosphere of the studio and lecture theatre to raise awareness of the link between social issues and architectural ideas (Salomon, 2011) in an immersive and experiential manner. Live Projects can expand students’ skills and abilities by challenging them in ways the studio curriculum cannot. Through the application of such projects, students begin their individual practice with a tangible professional dimension because they “... *are taught skills beyond their courses and given increasing responsibility within the context of the project constraints and they are also expected to develop professional accountabilities and attitudes...*” (Brown, 2014)

Live project sites are often geographically close to the university campus for good practical and community-based reasons. There are other non-local situations however where long standing human needs can be addressed by the practical application of students’ innovative thinking. The Global South and other low income nations contain many such conditions that offer receptive laboratories for this type of investigation. The pressing planetary issues mentioned earlier have a heightened significance in The Global South because their consequences are often extreme and life changing. Despite the risks of stumbling into political/ethical naivety, or privileged self-righteousness, as Emily Pilloton has rightly cautioned against, (Pilloton, 2010) it is arguably in Global South contexts that a student’s horizons and conscience can directly inform their work in a fully holistic manner, resulting in a fruitful theatre for the development of ‘ethical practitioners’.

WHY AFRICA?

Agenda 2063 Aspirations for the Africa We Want

An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children. (<https://au.int/en/agenda2063>)

Africa is a youthful continent. Over 65% of the continent’s population is below the age of 35 years, which is both an opportunity and

a challenge for Africa. From 2035 onwards it is expected that the number of young people reaching working age in Africa will exceed that of the rest of the world combined and will continue every year for the rest of the century. This impending demographic dividend is expected to add to Africa's economic importance, something which is seen as positive and an important surrogate to sustainable development (Malonza, 2018).

According to the UN, Africa's urban population is expected to more than triple over the forthcoming 40 years, from 395 million in 2010 to 1.339 billion in 2050, corresponding to 21% of the world's projected urban population (UN, 2014). By 2025, it is projected that Africa will have more than 100 cities with at least a million inhabitants, including at least 15 large cities, each with at least five million inhabitants. Between 2015 and 2045, the population of urban Africa is expected to increase by an average of 24 million people per year.

"Three centuries of slave trade, from around 1500 to the early 1800s, were followed by a century of brutal colonial rule. Far from lifting Africa economically, the colonial era left Africa bereft of educated citizens and leaders, basic infrastructure and public health facilities." (Sachs, 2005)

There are a number of reasons why Africa has been chosen. One obvious one is to help the next generation of African-based architects employ socially enlightened and environmentally friendly urban thinking in the design of their own human future which faces unprecedented urbanization. After all, the planet's climate crisis has been largely a result of the West's carbon-based industrial activities and it could be argued that, to put it bluntly, we owe Africa this. But perhaps also because high quality design expertise exists in Europe's Schools of Architecture and we have a responsibility to share that. Collaboration with the emerging generation of architects facing the challenge of designing a built environment in sub-Saharan Africa is one particular option. We believe that in order to bring together students' horizons and consciences, all European Schools of Architecture should be actively and energetically involved in collaborative projects set in sub-Saharan Africa.

WHY RWANDA?

The Rwandan Government has particular expectations that its architecture students are enthusiastic learners and innovative thinkers who will contribute significantly to the country's construction industry and overall development. Given that there were only 10 qualified architects in Rwanda in 2008 at the time of SABE's establishment, (and all educated outside the country), it raises questions about the role of academia in empowering youth vis a vis a culture of critical, independent thinking.



Fig. 1: 'Gacaca'community discussion, Rwanda: "justice among the grass"

What motivates a student to study architecture? When considering joining an architecture programme, Rwandan students admitted to the architecture programme express contrasting emotions of excitement and panic. Excited to be the future architects of such a remarkable country but panicking about the long hours that they anticipate in what is typically a more time-consuming academic journey than other disciplines. This is a familiar picture for architecture students across the world, however for Rwandan students, there is the added pressure of finding the confidence and critical independence to conceptualise architectural problems and solutions within a culture known for its reticence and introversion. Does such a student have adequate space and time to evaluate the environment they are trained in? Perhaps for them, more than any other, their place of residence has a special role as a welcoming sanctuary and home in which to spend the few available spare hours of leisure they may have. These challenges alongside those created by their academic programme will impact on their personal horizon. Humans are social beings and our everyday is shaped by the experiences of life we encounter. Given a chance to decide on which campus they might join, student residential accommodation can be one of the key issues that students take into consideration when applying to a university.

Available campus accommodation in Rwanda is generally poorly designed and constructed, resulting in cramped dormitory spaces where privacy is compromised. Students eat unhealthily (due to poverty and lack of choice) and seek

employment to cover living expenses despite opportunities being scarce. This results in a lack of concentration and ability to fully focus on academic work. Student horizons are severely restricted as a consequence. Conditions for able-bodied students are challenging but for those with any form of disability, it is almost unbearable. In this project, student designers from the Global North and Global South address their fellow students' difficulties by combining empathy with creativity. The health and welfare of university students is critical to their personal education and development as well as to the success of the university and country. A university can be a significant influence on the formative development of the next generation of citizens who will shape and lead that country. It should be a place where horizons and conscience are nurtured, not thwarted.

The university influence numerically matters because Rwanda is urbanizing rapidly. Between 1970 and 2012, Rwanda's population increased by 16.9%. Although the current urbanisation rate is 18.4%, it is envisaged to reach 35 percent by 2024 (Republic of Rwanda, 2012). The university influence scientifically matters because the sustainability that academia seeks is a process that aims to impact development of all aspects of human life by resolving conflicts between competing goals in a city such as environmental responsibility, economic efficiency and social cohesion (Hasna, 2009). In this perspective, since Kigali is by far the most rapidly urbanizing city in Africa and is seen as the gateway of the development of the country, in support, the government has launched a series of policies and a legal framework to promote healthy urbanization.

Rwanda's Vision 2020 strategy seeks to address questions like; How do Rwandans envisage their future? What kind of society do they want to become? How do they construct a united and inclusive Rwandan identity and what are the transformations needed to emerge from an unsatisfactory social and economic situation? (Rwanda Environment Management Authority (REMA), 2017). The authors agree that Vision 2020 as a Horizon for Rwanda was timely for a nation healing from the wounds of the 1994 genocide, a period when the conscience of every Rwandan needed to be uplifted and better aligned towards a more promising future of their country.

CHALLENGES IN GLOBAL NORTH/SOUTH INSTITUTIONAL COLLABORATIONS

Our joint ambitions extend beyond live project collaborations to the establishing of a joint academic programme between a European-based partner and an Africa-based partner. This latter ambition generates particular institutional challenges.

At GSA for example, for any new academic programme involving an international academic partner to be established, that international partner needs to satisfy one of two key QA criteria. They must either be an acknowledged world-class leader in the discipline of specific interest or alternatively, there must be evidence of an existing deep research relationship between the two institutions. According to the QS World University Rankings, there are no universities on the continent of Africa in the top 100. In fact, African Universities only begin to appear on this league table at no. 198 (University of Cape Town) followed by no. 400 (University of Witwatersrand). The only African universities listed in the top 1000 are all based in South Africa, which sends a particular message that there are essentially no world-class universities on the African continent. We consider it unacceptable to ignore Africa as a context for collaborative work using this criterion. Rather, to consider any future joint academic programme with an African partner, we are nurturing a deep research-based relationship founded on shared interests and values and collaborative activities.

THE PROJECT

“Of all the variables conspiring against full-immersion pedagogies, the academic calendar is one of the most insidious.”
(Hughes, 2014)

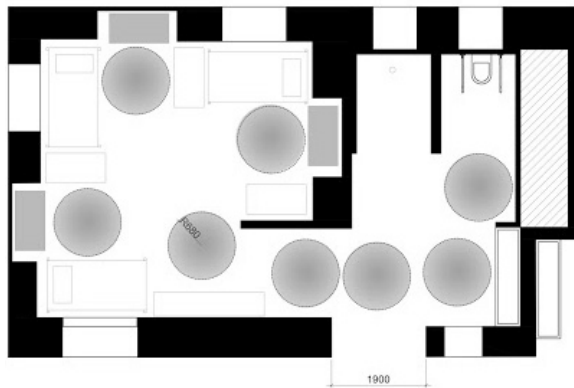
In the last five years, a number of small groups of MSA students in Glasgow have chosen to develop research-informed live design projects for real clients in two African countries as their stage 4 research project. The first involved the design of a community sports facility in Accra, Ghana for disadvantaged teenagers. Developed in collaboration with an Accra-based secondary school and a Ghana-based sports charity, their clients were three Ghanaian community workers of a similar generation. After two years of desktop development taking the design to a planning application stage including two site visits and client presentations, the project stalled due to difficulties encountered with the Department of Education in Accra.

The second project (now in its fourth year of development) examines student wellbeing through the design for a barrier-free student hostel accommodation for the University of Rwanda in their Huye Campus, outside Kigali. Phase 1 involved MSA students using digital platforms to understand and navigate complex institutional structures in Rwanda and establish effective communication protocols with key individuals in UR. Phase 2 involved a second student group exploring the topic of design methodologies for Global South conditions. This resulted in a

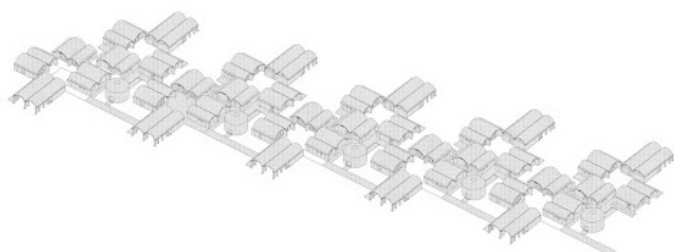
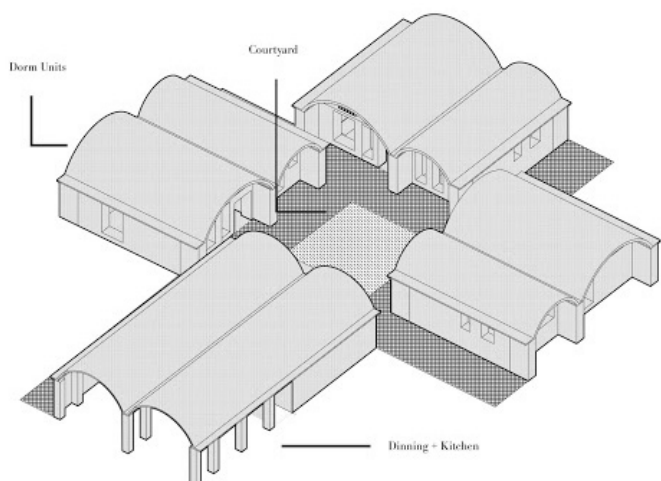
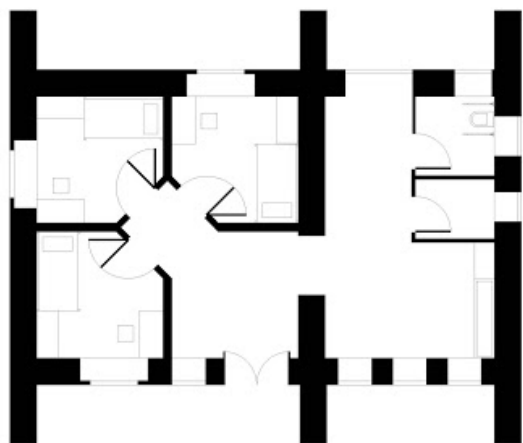
design for the student accommodation which was presented to the University by our external consultant Dr. Lynn Legg, an NHS Research Fellow and special consultant to the UR Vice Chancellor, Professor Philip Cotton. This phase of development was greatly helped by the strong personal support and involvement of the UR Vice Chancellor himself, and the leadership and support of a UR project champion and collaborator, Dr. Josephine Malonza, the founding Dean of the School of Architecture and the Built Environment at The University of Rwanda.

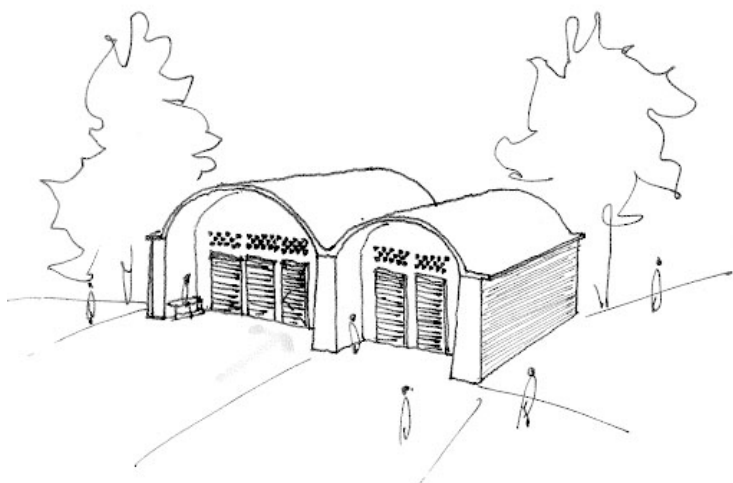
THE DESIGN PROPOSALS

The students were able to make contact with Rwandan students in the UK and from them and Dr. Legg, learn more tangibly what student life was like in that country. Addressing issues such as low building skills, student privacy, designing spaces to socialise, eat or cook, or grow vegetables, student income generation, all helped establish a design criteria which students used to shape their architectural solution. [Figs 2–6] The resulting design is a cluster of single storey repetitive vaulted brick pavilions housing sleeping and sanitary spaces, intermingled with separate kitchen/social spaces, all arranged in an informal courtyard sequence. This ‘student village’ model creates a potentially fruitful mix of private and public internal and external spaces, configured from domestic-scaled pavilions which could facilitate a phased development if needed and which could also accommodate different topographic situations (the site was not known at the time of designing). [Fig 7] Specifying brick meant also that cheap, local, low skilled labour could be utilized in the construction process, while minimizing imported specialist expertise and products.

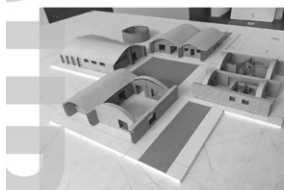


Figs. 2-7: Design proposals by MSA students





overall view of accommodation for 100 students

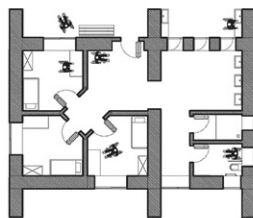


model of courtyard

Our vision is for **INCLUSIVE** residential student accommodation for everyone - **BARRIER-FREE LIVING**. Our design incorporates productive **GARDENING** to support student **COOKING** and nutrition. The design balances the needs of student **PRIVACY** as well as **SOCIABILITY** and it is responsive to both Rwanda's climate and **LOCAL CONSTRUCTION** and **MATERIAL** use, making it both environmentally and socially **SUSTAINABLE**.



plan of courtyard

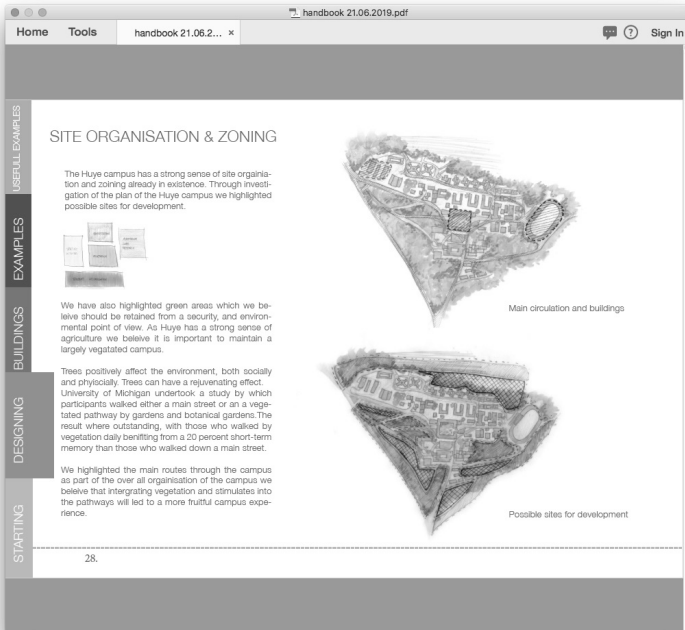
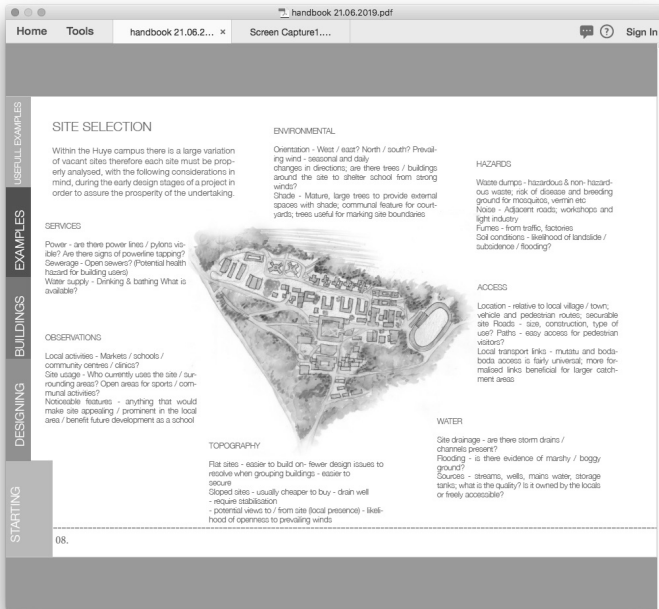


plan of dorm unit



render of the courtyard

OUR VISION



Figs. 8,9: Extracts of Handbook, Phase 3

From their research into student life in Rwanda itself, a number of issues of student wellbeing informed the configuration of the architecture. Privacy and sociability informed the choice of individual rooms separated by solid brick walls

as well as communal kitchens and social spaces. The need for income generation and healthy eating influenced the inclusion of productive landscapes where both new practical skills and fresh vegetables could be developed. Specifying brick opened up opportunities for students to get involved in the actual construction alongside the professional builders.

An inclusive, barrier free environment informed the design and dimensions of the generous circulation routes both externally and internally, facilitating ease of wheelchair and other sensory impairment access. It also created pleasant routes which students and their helper(s) could navigate in a relaxed manner. There is no doubt that the build area per student in their scheme is more than existing norms in Rwanda and it is unlikely to remain in the current configuration as it progresses through a real procurement process. However, it represents an ideal, which forms the basis of further design development once financial limits are firmly established.

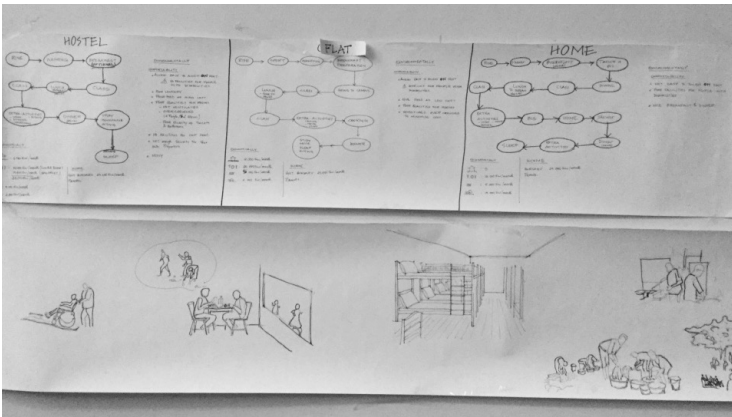
Phase 3 involved a third group of MSA students exploring the wider issue of procurement processes for self-build community projects which had educational as well as estates ambitions. [Figs 8,9] This study took the existing design proposals from Phase 2 and framed it as a community self-build project, resulting in a design guide/handbook full of practical navigation assistance in taking a project from nothing to something which was presented to UR senior staff. It covered a wide range of topics ranged from how to assess a site, through to practical building skills. Phase 3 concluded with a collaborative MSA and UR staff/student research-capacity building workshop in the Kigali campus in September 2018, which created the opportunity for students to explore their values and agency in action. [Fig 10]

The workshop in Rwanda involved the Rwandan students critiquing the established MSA design as well as creating new visual material articulating important aspects of student life which would impact on any student hostel as well as drawings and models. [Figs 11,12] Funding limitations meant that only one MSA student joined the fourteen Rwandan students for the workshop. This student's role developed quickly, supporting the students in their digital, visual and three-dimensional material which was presented to the UR VC and Deputy VC at the end of the week's work. [Fig 13] In the current phase (4), two MSA students (English and Nigerian respectively) have expressed a research interest in the topic of funding projects of this nature.

The School of Architecture and the Built Environment (SABE), in Rwanda is excited about the project. Staff and students believe that the study stretches beyond a conventional academic project, extending into a design-thinking laboratory. It offers a chance for MSA and UR students to think differently and



Fig. 10: Staff & students at workshop



Figs. 11, 12: Initial sketches by Rwandan student exploring student life

become more and more accommodating to society at large. SABE's view is also reinforced by the voice of visiting faculty from various universities in Nigeria, who have argued that the issue of student behavior is a key factor needing examining in developing new hostels in University campuses around the world and particularly in Africa. From their experience through various case studies in Nigerian universities, they have emphasized that student behavior is not well enough understood. As a result, the process is largely led by assumptions made by university management in the formulation of what turns out to be a rather restrictive architectural design brief. This limited understanding of student behavior and need for particular facilities provision is then interpreted by architects through their design decisions, with unsatisfactory and uninspiring results.

The twenty Rwandan students who took part in the collaborative summer workshop were enthusiastic and hope to see the hostel project implementation come to fruition in the near future. [Fig 14] Some would struggle to endure more than a semester of conventional campus hostel life and have had to seek alternative accommodation. They hope that during their tenure as students, they can still have an opportunity to reside in a suitable student hostel as conceptualized through this project. For female students, this project presents a potential solution to an urgent issue. They need to reside in secure accommodation near school due to the long hours and nights spent in studio classes but would prefer to do so in a well-designed purpose-built facility with good access to kitchen, sanitary and social facilities. As the students make models and work on presentations for the School or University Senior Management for this phase of the project, it is inevitable that their interest will grow and deepen regarding similar in-depth and participatory design pathways.



Fig. 13: Models of design by Rwanda Students



Fig. 14: Site visit enthusiasm

CONCLUSIONS

The project demonstrates how excellent student accommodation could be realized to meet the particular needs of student life, while also being the vehicle for valuable educational and research opportunities. It explores how student participants are challenged to consider what their agency and practice might be in the future. It questions how their hidden ‘horizons’ and ‘conscience’ can be brought into the open to inform their design process, further reinforcing the idea that the person of the architect can make a difference for the better, regardless of geographic locus and cultural audience. It explores how collectively and collaboratively these personal and private attributes can be seen as the foundations of a new “hidden school” of global dimensions based on which, sustainable interventions begin to emerge.

The ambitions for our student hostel project are twofold. From a Rwandan perspective, it is to create an inclusive bottom-up procurement process which could impact positively on the design of hostel accommodation for Rwanda students, by involving students in that very process. It provides an immersive educational experience helping define what the role of an architect is in Rwanda’s future and results in a building which impacts directly and positively on the next generation of students. From a European perspective, it is to create an opportunity for architecture students to bring their global ethics and creative motivations together through the vehicle of

an innovative, collaborative North/South architecture project which identifies clear human needs. It reinforces their instinct that an architect from Europe can help transform people's lives across different cultures through building.

Is the output of the GSA and UR research collaboration knowledge + empathy? Is the solution to the question raised at the beginning of this paper simply the addition of academic modules for 'universal design' for students of architecture, construction management, estates management, landscape design, so that they all can be suitably enlightened and informed about the issues the project is exploring? It is probably too early to answer these as it is difficult to draw out satisfactory conclusions from a project still in progress. So far there has been a very enthusiastic meeting of minds, highly positive responses, foundations for collaboration, high level university support and engagement throughout the project's different phases. There has been a general appetite from everyone for inclusive, student-centered engagement in this live project. There are ongoing challenges of funding any collaborative event which involves both student cohorts, whether it takes place in Europe or Africa. There are the challenges of funding the actual building project itself. As the project has not yet been constructed it limits any kind of comprehensive reflection. Even research-informed buildings require inhabitation, lives to be led to reveal whether the claims and ambitions made in an academic paper such as this have been met and fully realized. Dissemination of the project's development has included the 2019 accessibility advocacy in a collaborative regional dialogue between National Unions of Disability Organisations from Rwanda and Uganda [Fig 15].



Fig. 15: UNAPD Conference Panel, 2019.

There is significant student appetite for such collaborative North/South projects, something which appears to encourage the horizon/conscience dynamic referred to earlier. Yet education is not only for students, but also for academic and administration staff and the communities around us. The project is ongoing and continues to engage students' interests and conscience. This result points to the need for transformational thinking around architectural education. The paper recommends a more pragmatic and dynamic approach towards providing adequate and satisfactory facilities to not only accommodate student hostel life but also that which touches on procurement modalities to ensure value for money through innovative interventions into procurement processes.

A replication of this kind of approach into other higher institutions of learning will go a long way in inspiring prospective students. There are amazing opportunities to exchange ideas and methodologies of teaching architecture. South has lots to learn from North and North has lots to learn from South. Exchange programmes create an opportunity to make projects or design studios more context-specific by paying attention to inclusion, effect and evidence. The collaboration further helps to sharpen the conscience and the horizon. It becomes a springboard into the future, where students have to face real clients, real live projects, and the complexities of navigating and delivering real architecture.

ILLUSTRATION CREDITS

- Figs. 1, 11,12,13 Christopher Platt
Figs. 2-9 GSA
Figs. 14,15 Josephine Malonza, UR.

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