# Teaching Information Architecture in South Africa

## In Conversation with Terence Fenn

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*Q: I understand that you were lecturing at university when you first encountered what you now know to be information architecture. Why did it interest you and how has that interest developed over the years?*

My original qualification and experience was in fine art, and when I began working in the Multimedia Department, typically we were designing digital products on platforms such as Adobe Flash and Macromedia Director. Our approach tended to emphasize visual creativity, and very much a continuation of graphic design tradition towards design. Around 2006, I realized that creative digital design can and should be more than a tool for online marketing and game-play and I started moving out of that world. Thus, I started to look more closely at the traditional design fields of architecture, industrial design/ product design that focus on the how people interact with the world, through the artificial. So, my approach to digital and design has always emphasised the creative role of technology design, and how it alters, enhances and occasionally disrupts people's lives. In this sense, I think of design as a separate tradition to engineering approaches to technology development, one that emphasizes integrative creativity over techno-centricism. So, in a shift away from advertising-orientated design, I started to view interaction design as an opportunity to practice and teach design in a more innovative manner. I don't think I was particularly alone in this view, and this general move aligned with the emerging fields of user experience design and subsequently service design.

This move towards a consideration of the design of digital technology from an innately human-centred perspective, really changed my whole approach to thinking about how design should be taught. At the time a whole range of new dynamics were emerging in creative design. Central to this was the emergence of design thinking, both in the practice-world sense, through companies such as IDEO, as well as in the recognition of a lot of important work done in the previous decade on design cognition and philosophy by authors such as Nigel Cross, Klaus Krippendorff, Richard Buchanan (amongst many others).

In 2009, I began collaborating with Jason Hobbs in both design teaching as well as academic design research. Jason had recently returned to South Africa from working abroad in the UK digital design and was more familiar with the global emerging practices in digital design, in comparison to what was going on in Johannesburg, at the time. I had a more traditional design and design education background. We both shared a vision that design should be applied to engage with problems faced by society, should have a social impact, and should work towards making a better country for all, particularly from our context in the Global South.

While we were perhaps a little more radical or political in our views than mainstream digital design, we recognised a major 'turn' towards societal factors. Through our academic and professional work, Jason and I realised that in design, practices such as user-experience design that were incorporating human-centred, design thinking methodologies was going to be really important.

We began to realise that one of the core results of this human-centred design thinking turn, was the escalation of conceptual and cognitive workload faced by designers, and that a traditional design education that was largely centred on aesthetics and persuasion wasn't sufficient for the task.

Both Jason and I felt, and still do, that information architecture (IA) provided an approach to both generate and organise creative thinking in response to complexity. We started to see the potential of information architecture, to address complexity, and related approaches to resolution not from a universal design pattern angle but particularly in terms of the situated and uniqueness of individual problem framing and solution pairings. We viewed design as capable of engaging with the real-life complexities of everyday, and, information architecture as the principal design tool for achieving this.

As researchers, and also (self-appointed) advocates, we also realised that in our local design community (professional and academic) there was a lot of misunderstanding and land grabbing around terms such as information architecture, interaction design, user experience, etc. Suddenly, everyone was a user experience designer, or an information architect or an ethnographer. But there was very little theoretical and conceptual knowledge to what those practices or terms actually meant. While we were never particularly interested in prescribing to people how they could self-identify, we strongly believed that design, and its corresponding fields (including information architecture) should be respected enough as fields of expertise to have certain competencies and knowledge explicitly associated with them. Hence, we seek to clarify or at least raise discourse on many of these issues through our writing, but in addition, we have done much advocacy work through such local and international conferences and public speaking opportunities, as well as hosting World IA Day in Johannesburg since its global inception.

*Q: What unique perspective do you have to offer as a South African educator and designer?*

A very important aspect to teaching design here in South Africa is that the majority of our students are black Africans, and the history of design is largely built on the Western tradition. It's really important and in line with human centred design to use information architecture to break down many of the tacit constructs of [western] design, and focus on assisting students to construct their own understanding of the world and creative action. In my view, instead of design being some kind of magical act that a person was born to or inherited special abilities for (which was very much how I was taught design 20 years ago), information architecture thinking abilities allows one to be able to develop and communicate design thinking all the way through the creative process. In this way, students are able to learn how to organise and articulate their own construction of design contexts and designerly responses. By making the tacit visual, through information architecture modelling, allows for abstract concepts and understandings to be made visible, and as such open for discussion, critique and confirmation. This way, information architecture directly helps the 'hidden mastery of practice' to become a developmental process, rather than a cultural inheritance. Information architecture allows us to unpack design decision- making in the space between the problem and the final product.

Information architecture is also a great tool to address social problems. South Africa can be considered both a first- and a developing-world country and is characterised by extreme inequality. It's quite easy to see a lot of social problems brought on by Apartheid, and in more recent times apathy, mismanagement and corruption. A lot of the urban areas suffer from the lack of infrastructure and service delivery, poverty abounds, there is a very high alcohol consumption rate, and it is a very violent society in general. When I went to university, in the mid-1990's, the student body was about 90% white European. When I began to teach, the dynamic had shifted at the university as naturally many more Black students had the opportunity to attend. Johannesburg has been described as one of the most diverse places in the world and the sheer range of ethnicities and languages of our student body makes working in education a very interesting place to be in.

As I stated earlier, I became interested in information architecture and digital media as I was particularly interested in human and societal centred design. I also realized that design is completely cultural. Right now, even in a place like South Africa, that design culture and capabilities are often equated with an exposure to Western culture. The ability to excel in the field was built around certain dispositions that were often expected but never explicitly taught. These dispositions were often a result of your social class and home culture. It was more about how many books you grew up with in your home, what sort of movies you were exposed to, did your parents take you to art galleries, etc. Many of the students we taught didn't have access to any of those Western cultural moments

that would allow them to arrive at university with a full-fledged "design mind". Looking back on it now it seems ridiculous, the degree of embedded privilege that was expected to gain access and thrive as a student of design. Unfortunately, I still routinely see examples of this mono-cultural approach to design.

Avoiding this top down approach to design knowledge drove us to apply information architecture thinking and technique in our programme. We extended the pragmatic uses of information architecture in, say, navigation design or site content organisation, and applied information architecture as an approach to meaning-making or 'structure thinking.' We focused on the ability to articulate the designer's thinking process throughout the entire design process. While fully aware that design is also about imagination, pushing the levels of the possible and bringing beauty to the world, we felt that information architecture as a language for meaning making should be a fundamental skill for both design educators and students seeking to create alternative ways of being, thinking and engaging with the world, through design.

*Q: What is your approach to teaching design and how does information architecture fit with that?*

I work in an interaction design programme housed within a larger department focused on digital media design. In the interaction focus, we emphasize a human-centred creative approach to digital product design. The other focus of our department is digital content design such as animation, format, video editing, compositing, narrative design, etc. However, all our students do primary modules in both foci, so there is a large degree of overlap. Our student work focuses on what Floridi describes as the 'outer- loop' of technological design and as such is concerned more with how technology is created to enable human needs as well as cultural and environmental sustainability. I would not consider us a traditional 'engineering-orientated' HCI program, although of course, we have inherited many aspects from HCI.

In my view, it's impossible to do interaction design without information architecture. You can't have a product without structure, and you can't have structure without some sort of intentionality. In an analogy to language, the meaning of words are conditioned in terms of how they are contextualised in sentences. Jason and I argue all the time whether interaction design is the bigger field or information architecture is the bigger field, with the other being a subset underneath. Ultimately, when people ask us what we do, we respond with "user experience design", because we know they will understand what that means. I think overall, our tendency is to consider clear conceptual lines between the

various approaches in our writing and teaching but in application, I feel any specific design activity would integrate information architecture and interaction design, with other approaches, in novel and holistic ways, and we shouldn't get too hung up on classification. That's why I tend to prefer to describe what I do and teach as 'design' and think of information architecture and interaction design as approaches to thinking about and taking designerly action in the world.

Early in the digital media program, first and second year, students are taught by a variety of people on a variety of topics. We also do a lot of information design. Information architecture is packed within information design projects. They are first introduced to Richard Wurman, and they start thinking about typologies and topologies and hierarchies. That is offered through the lens of information design. They are visual students, not science students. So that approach hooks them into those ideas.

*Q: Is information architecture called out explicitly in your courses?*

Early on, students are taught a range of basic information architecture principles explicitly as a core aspect of information design. Content is centred around organising information and focuses predominantly on classification systems. A lot of this foundational work is informed by Richard Wurman's approaches to information organisation. At the same time, the students learn front-end programming basics like HTML, CSS, JavaScript. As much of our course requires practical outcomes, these early stage projects tend to also incorporate the more pragmatic aspects of information architecture, such as user-journeys, site navigation, wireframes, etc. Much of this is packaged as interaction design rather than explicitly information architecture. I also teach design research at various levels of our undergraduate, where I bring in a lot of the organizational principles and practices of information architecture, particularly towards framing of design problems and strategic opportunities. In the third year in the program, in our 'interaction design' focus, information architecture is taught in a much more explicit sense, from both a conceptual and practice focus. Here, various informational, technological, and research orientated approaches, learned earlier, are taught in more depth and framed as information architecture. So, all our students recognise the information architecture character of their broader interaction design practice.

We get quite formal about how we approach these things so that our students are clear about what they are being taught. Many design/development practitioners, in my experience, are often inclined to treat these disciplines such as information architecture, interaction design and experience design, often as they lack formal

qualifications, as design approaches that you can absorb via YouTube, or pretend to know by simply stating so on your business card. I believe my students need to understand there is a strong tradition of knowledge for each of these fields. They've got to be able to defend their qualification and their knowledge. When they go out into the world and state that they are an interaction designer or an information architect or an experience designer, they need to know and be able to state clearly what that means.

In our postgraduate courses students often develop "research through design" projects that explore specifically information architecture concerns.

*Q: How else is information architecture helpful?*

I encourage students to develop a visual language that communicates their information architecture thinking. This "thinking as drawing", is an embodied activity of capturing thoughts, organising principles and decisions on paper by hand. Joining circles to create affinities, testing visual arrangements through diagramming, structuring content in spatial and temporal arrangements, etc. These are very tangible skills. This type of sketching, helps the design student figure out what works and what doesn't work. Not just in their thoughts, but in more concrete and editable forms. This type of embodied thinking becomes such a natural and important process, particularly when responding to complex "wicked" problems. In my mind this may well be the most important contribution of information architecture within design language.

*Q: What is your philosophy of design and information architecture?*

Firstly, as a country with an ongoing struggle with employment, poverty and ineffective (but very rigid top-down) governance, I believe design can play a strong role in helping individuals and communities to focus their agency. Thus, there is a need to restore the role of creative innovation as a way of life. Everybody can design, as all people have the potential to design, it is a human ability. But in a country like South Africa, generations of cultural and societal repression has led to a crisis in creative action. Design as a social activity that can drive positive change needs to be better understood, then taught to others, so that everyone can build a better country

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However, while everybody has the potential to design, I also strongly believe that design expertise must be highly regarded and nourished in order to support, and in

many ways enhance the potential of both communities and industry. And that perhaps these shouldn't be seen as separate agendas, as fundamentally all design should seek to improve the human and planetary conditions.

Focusing on human-issues raises a number of questions, some of which cannot be unanswered without paradox. As designers, on what terms should we engage with people and communities? Are we leaders, facilitators or neo-colonialists? How do we understand people's problems? Can we? Who asked us to? But, also, recognising that change and disruption can also lead to emancipation. As designers, we need to also reflect on what is the most important contribution we can make. We can't solve everything. Are we social workers or cultural theorists, or artists or technologists? Do we have to choose? In our research and teaching these are the type of the questions we have tried to answer.

My personal response is to understand that the world is overwhelmed with conditions that could be better (as well as things that must be preserved and cared for as they are). As a designer, it is not enough to "problematize", we need to work towards achieving the world we want to live in. Our fundamental intention should be to create and articulate human meaning through design action. Information architecture is essential to this goal as it provides the means to engage with human meaning in a transparent and traceable manner. Information architecture bridges the abstraction and the concrete, the theoretical and the pragmatic, and finally helps to ensure that final designed outcomes can be reconciled with human contexts from which they gain their original cause. That's the interesting part of design for me. Not so much the crafting of design products but the integration of the real, the true, and the ideal through the abstract to the artificial.

In my teaching, I view the type of thinking imbued in information architecture in its 'turn' towards meaning making as critical in terms of my personal philosophy towards education and design. While my own art and design education was in a time when design craft was perhaps at its peak, for the reasons stated earlier, I felt this was a particularly unhelpful approach for my students. I wanted my students to think of design as a form of intellectual curiosity - a way of building their own knowledge and creative intentions through an informed engagement with the world. I felt that the then emerging design thinking methodologies provided a high-level structure but that information architecture had the potential to provide a greater degree of conceptual structuring within the various phases of a design thinking process. For example, while design thinking would suggest a 'Discover' phase, information architecture can help frame and communicate at a useful level of detail the intricacies of a wicked problem. In this manner, information

architecture becomes a core ability for all designers, in any situation to both manage and communicate decisions and intended action.

*Q: How has your approach to teaching design changed over the years?*

Initially we were concerned with helping our students to structure their thinking through all the phases of the design thinking process. This may now sound a bit run of the mill, but at the time there was an absence of serious scholarship and educational know-how in this area. So up until about three-four years ago, we were focused on establishing how information architecture could be effective, or on new techniques for the various phases of a design thinking process. We had very good success with this approach, we really managed to ramp-up the quality of our student's work and gained a very good reputation for teaching 'serious' user experience in our local industry. Graduating students have excelled in placements overseas and generally there is a high level of competency in terms of the commercial world of design that we've managed to instill in our students. In addition to notions of industry "readiness" we focused on pushing our students beyond commercial competencies to engage with the role of the designer in the social world. In South Africa, the role of design for social upliftment is fairly mature. Many people here tend to focus on providing a service to the greater community and to society. In South Africa, this is very much the ethos of most design faculties. So, a lot of our teaching for the first six or seven years that we collaborated was about trying to build those structures into course work. A lot of the concepts emerged out of our research practice, so we published quite a lot and wrote quite a lot about it. All that was helpful because it gave us a structure of good design education and (in our opinion) a really solid course.

In the last three years, I've become more interested in the traditional role of design in terms of the role of artefacts as vessels of human desires and values. Intellectually for me this is a shift away from the more pragmatic range of mainstream user experience design. Principally, as I have become really jaded with commodification of design particularly in relation to fintech and the 'silliconvillification' of digital design, I am more interested in terms of how we add something of value to the world. And, I don't consider a billion-dollar market value estimation, value. I consider preserving the planet, sustaining and adding to culture, equality and social emancipation as value. Thus, I am concerned with design as more than just a response to the problems of the world, but rather as a creative mode of consideration and taking action in the world that suggest alternative ways of being. This approach shares many similarities with speculative or discursive design, however, in my mind the current failures of these approaches as their inability to move beyond highly personal interpretations of discourse.

I believe the role that information architecture can bring to this approach is to aid the designer to organise, structure and communicate their suggested alternative futures in a mode that engages with qualitative research aimed at the intersubjective rather than the personal. Thus, moving beyond the current "design as an imitation of art" approaches to speculative design to be capable of interrogating the ideas behind them more transparently and consequently testing them in the world of people. I call this design speculation. This approach takes information architecture as a structuring tool and scaffolds conceptual design on top of, and utilizing, many of techniques and concepts that have emerged as a result of human-centric design approaches. So, in summary, I feel we should avoid being overly responsive to current problems and rather design more for the future we want.

*Q: How do you build a focus on social impact into students' design education?*

At a general level across our faculty all students are exposed to critical theory as well as a high proportion of societally oriented practical projects. For example, in our fourth-year program in digital media studies, students must do three projects.

This year, in the first project assignment, the students had to imagine they were back in Apartheid South Africa and then design using contemporary today's technology in order to resist Apartheid. Students alike were required to interview somebody in their community that has actually experienced life in South Africa in the 1980's. The experience of these interviews was a strong learning curve for most of them as they began to understand what went on during that time in our country's history as many of them had very superficial views on the realities of that time. Thus, and based on their explorations, they had to envision a speculative product that could inform their peer generation of about what life was like for people in South Africa during Apartheid (fig. 1).
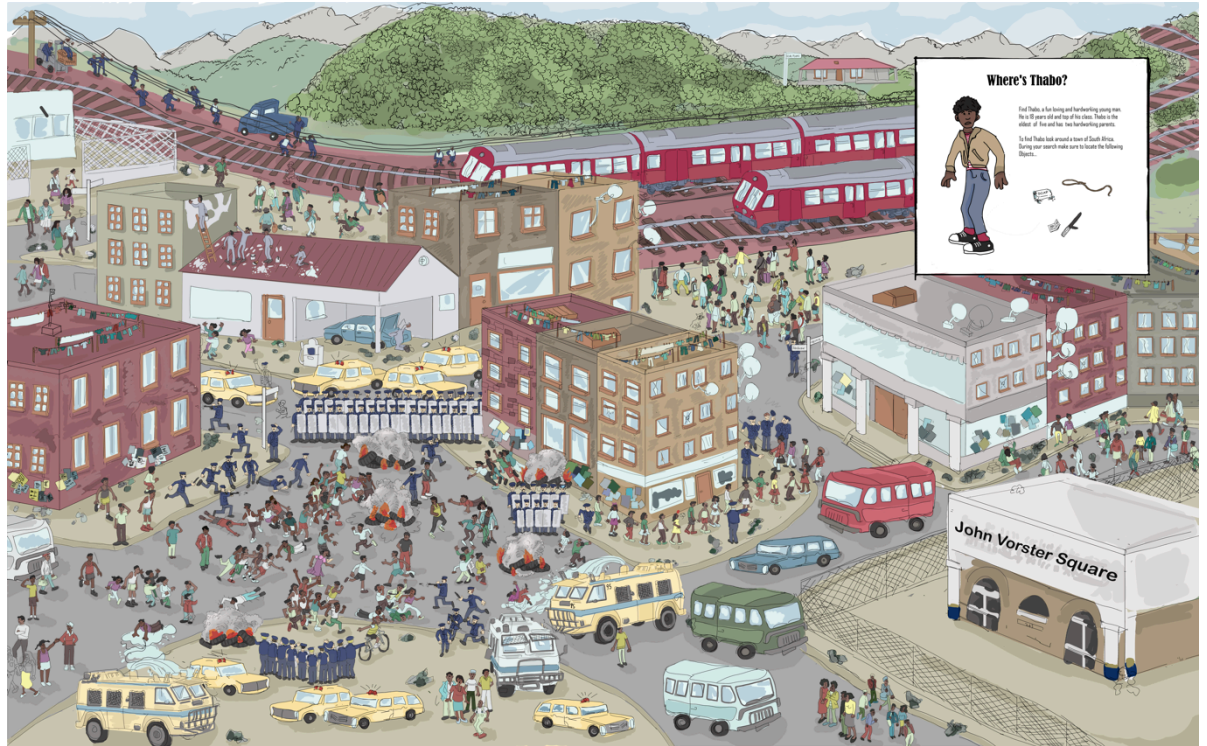
Fig. 1. *Where's Thabo?* During Apartheid many young people across all races were involved in either defending or resisting the State. The fate of many of these people is unknown, their bodies lying in unmarked graves across Sothern Africa. This work, using the narrative device of a 'Where's Waldo? Book describes this occurrence. The character 'Thabo' is not present anywhere in the illustration, emphasising his 'disappeared' status. Designer: Kathre Hulley (2020)

The second project titled *Smart Services in the Democratic City* involved interaction and industrial designers collaborating in groups. Each group first had to investigate the notion of a democratic city. With that knowledge, they were tasked with going out into the city to find a way to make an identified "place" more democratic and more accessible for citizens using technology associated with the fourth industrial revolution. We thought the theme of the project was pretty cool as in many ways in people's minds democracy and smart [cities] are oxymorons. So, while this project typically concluded with a conceptual or "blue sky thinking" design intervention, these concepts emerged from a fairly sophisticated design research process involving site visits, secondary research, interviews in order to engage with the complexities of Johannesburg in addition to the implications of emerging technologies (fig. 2).
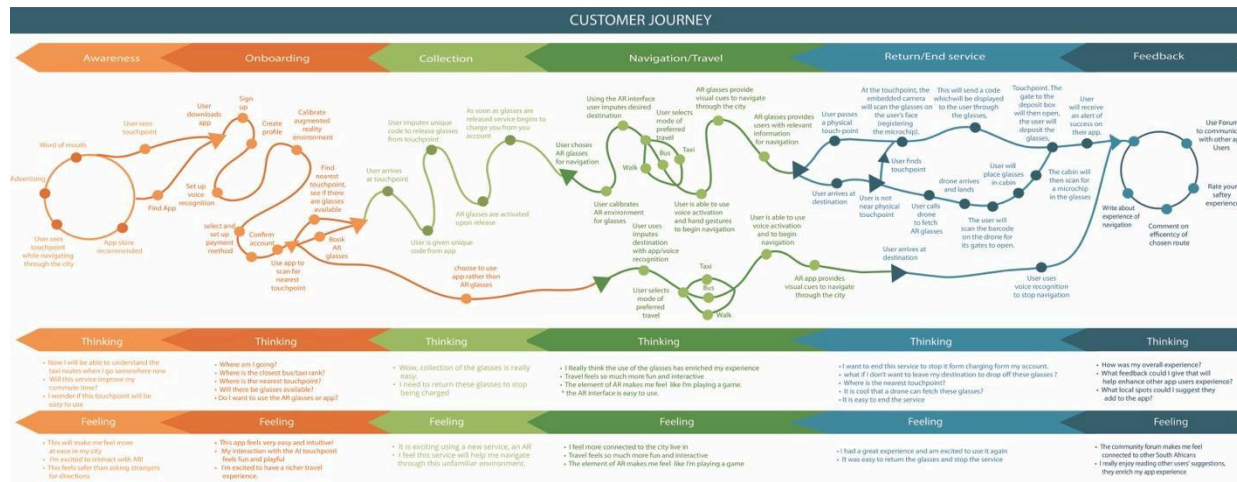
Fig. 2. Smart service for the Democratic City Customer Journey. This customer journey describes the students service concept for a drone delivered rentable smart glasses navigation device for visitors to the inner city. The glasses which project holograms, would help with wayfinding, provide narration, and warn off tourists from entering unsafe areas. Designers: Kathre Hulley and Michal Shushan (2020)

The final project is the student's own independent design project. It can vary depending on the student but our general expectation is that the students must identify a need evident in the world and respond to this need through their own practice that can be normative design thinking focused, speculative design or design speculation.

*Q: What is important to you to say to the information architecture community right now?*

Together with Jason Hobbs, I chaired the 2014 Roundtable on education and information architecture in San Diego. It was amazing to gather such a group of people to articulate things in a different kind of space in a different kind of place. While attending the corresponding IA Summit, what (didn't) surprise me was that while a lot of conversation was geared towards global issues, there was little awareness or representation of the information architecture community outside of North America, with maybe one or two people from Europe. The reverse seemed true when I attended EuroIA. For us to have a global conversation, it can't be kept in one place. There are a lot more interesting and diverse voices that need to be heard. A lot of what information architecture is about is about culture. We want to

recognise the world is full of multiple diverse and interesting cultures, and we've got to let them all into the conversation.