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Designing cultural competence: What South African instructional design can learn from nurses' assessments

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Abstract

The South African higher education landscape has become progressively diverse since the onset of democracy, with students emanating from different racial, cultural, religious, and socioeconomic backgrounds. As such, the country's multicultural context highlights the need to focus on pedagogical approaches that promote inclusivity when designing learning experiences for diverse student needs and backgrounds. Cross-cultural interactions exist between educators, students, and instructional designers. Given that both implicit and explicit awareness is said to impact learning, it can be assumed that developing cultural competence affects the way learning is designed and experienced. Furthermore, developing a deepened understanding of the human experience is integral to the design thinking process. As such, researching, defining, and developing an empathetic understanding of a student audience is core to strategising the design of learning solutions that effectively meet user needs. However, little consideration has been given to positioning culture as a core construct in this process, specifically within the domain of instructional design. There appears to be an underrepresentation of models and frameworks that guide cultural inclusion and diversity in instructional design. The hegemonic adoption of universal models does not offer a feasible approach to guiding cultural integration, or fostering cultural competence amongst designers, educators, and students. In contrast, culturally sensitive and inclusive frameworks and models prevail within the healthcare sector; a sector that is deeply concerned with the notion of holistic care for patients which can be attributed to a standard measure for cultural competence in healthcare being formalised in 2001. Given that instructional design as an emerging field in both design and education as well as the fact that it draws from a plethora of models and frameworks which guide the design of effective learning experiences, benefit could be gained by framing both fields – healthcare and instructional design in higher education – as care professions. Within this framing, it becomes evident that developing cross-cultural competencies is paramount to delivering inclusive and holistic education. This paper employs Giger and Davidhizar's Transcultural Model (2002), which emphasises cultural diversity and postulates that individuals can be assessed according to six cultural domains: communication, space, social organisation, time, environmental control, and biological variations. The model guides the effective design of healthcare solutions to meet the needs of a multicultural population, and this paper attempts to reframe this benefit within the context of instructional design. This exploratory paper will unpack each of the six domains, considering their relevance, application, and potential adaptation to Instructional Design within South African design education.

Keywords: Cultural competence, design thinking, instructional design, transcultural model, inclusive education

Introduction

The South African higher education landscape has witnessed an increase in the heterogeneity of the student population since the onset of its democratic government, an event that took place more than thirty years ago. Mass schooling, due to the influence of Western economies and globalisation, earmarked education as a key indicator of 'civilisation', democracy, and development (Rasiah 2022). Exiting a schooling system marked by significant disparities among students and transitioning into an environment characterised by cross-contextual interactions continues to present both challenges and opportunities for engagement across diverse social, cultural, and educational backgrounds.

As such, South African design educators and instructional designers are faced with the unique challenge to develop learning experiences that meet the needs of a highly pluralistic environment, and diversity and inclusion remain topics of great discussion within South African contemporary academic discourse. Reaching students across the full range of their learning experience can be an overwhelming task for design educators and instructional designers, particularly when accounting for the wide range of social, religious, linguistic, ethnic, and cognitive differences that shape the educational journey. A comprehensive understanding of the student as an end-user necessitates careful consideration of these intersecting factors. Through this view, culture plays an integral role in how education is experienced, perceived, and how learning takes place (McLoughlin & Oliver 2000).

Design education is inherently considered a cultural practice, existing within an interconnected space that overlaps with anthropology and social sciences. Definitions of design education consider these complexities to connect the human experience with design praxis and education. Instructional design is considered an emerging discipline within the field of design, intersecting with design in the utilisation of design thinking methodologies. However, there are not many instructional design frameworks which evaluate and consider cultural competence in designing learning experiences for design education. As such, this paper examines a different profession where cultural assessment tools are integrated into practice. Giger and Davidhizar's transcultural assessment model (2002) is deployed as a tool in nursing education to assess diverse patients' needs in the design of culturally appropriate care.

Conceptual framework

Positioned at the intersection of design education, instructional design, and cultural competence, this paper proposes a conceptual framework for culturally responsive instructional design in South African design education. Drawing on design thinking principles, it integrates Giger and Davidhizar's transcultural assessment model to support inclusive learning experiences that reflect the needs of a diverse student body. The framework is grounded in the belief that instructional design benefits from models that promote diversity and contextual sensitivity. By examining the model's six domains, this paper explores their potential to inform culturally competent pedagogical strategies.

Theoretical frameworks

Curriculum, design thinking and instructional design

Design-thinking is a human-centred methodology. An iterative framework it emphasises empathy as a cornerstone to problem-solving (Buchanan 1992). Within instructional design, it serves as a tool through which educational professionals can better understand learner needs and contexts. Kanuka (2006) describes instructional design as the theory and practice of design, development, evaluation and

management of learning. Whereas instructional design is positioned as an emerging discipline within design that focuses on the carefully considered design of instruction (Kanuka 2006), curriculum design refers to the structuring of subject matter within education. These domains collectively shape how instruction is designed, and learning is experienced in diverse educational settings.

Cultural competence in education

In South Africa's pluralistic higher education landscape, cultural competence is essential for instructional designers and educators to foster inclusive learning environments. Cultural competence is the ability to interact effectively across cultures, encompassing self-awareness, knowledge of cultural practices, and cross-cultural communication skills (McLoughlin & Oliver 2000; Rogers, Graham & Mayes 2007).

While widely adopted frameworks such as ADDIE and Universal Design for Learning (UDL) offer structured approaches for evaluating instructional design effectiveness, models that specifically assess cultural competence remain notably underrepresented in the field. Human-centred approaches like design thinking, already prevalent in instructional design, offer a foundation for integrating cultural competence, enabling practitioners to better acknowledge student diversity.

Multicultural, diverse students in South African higher education

A brief history of the South African higher education landscape

The contemporary South African educational landscape emerges from historical settings rooted in colonisation and segregation. Current conversations centred on decolonisation and transformation in higher education have gained prominence due to the 2015-2016 student protests (Le Grange 2018; Ajani & Simmonds 2022). During these protests higher education students called for a more inclusive and equitable educational experience for all. Movements such as #feesmustfall and #rhodesmustfall were strongly underpinned by a shift towards democratic ideologies, including the progression of diversity and inclusivity in higher education (Hlatshwayo 2023). While these movements initially emerged in response to the inaccessible cost of tertiary education for marginalised youth, it quickly advanced to encompass broader discourse on cultural inclusion within higher education. A lack of epistemological and pedagogical approaches to cultural preservation and curriculum design within higher education is highlighted (Hlatshwayo 2023).

South African students emerge from diverse cultural backgrounds that vary by ethnicity, language, race, religion and socio-economic standing. Government documents such as the Education White Paper 3 (Department of Education 1997), the Higher Education Act (Department of Education 1997) and the Green Paper 3 (Department of Higher Education 1997) delves into a progressive vision for a higher education landscape that is democratic, accessible and equal for all. Unfortunately, desegregation attempts can lead to heightening of tensions among diverse groups if not affected holistically (Meier & Hartell 2009).

Cultural diversity and its influence on learning

The result of the country's past is not only a diverse student body, but one that experiences inequities and barriers to teaching and learning within the tertiary environment. Additionally, cross-cultural interactions exist between educators, students, and instructional designers (Meier & Hartell 2009). These interactions influence students' expectations of themselves as well as the educators' expectations of the students (Rogert, Graham & Mayes 2007). As such, the desegregation of education

does not guarantee a mutual understanding between educators and students. How students learn and engage with those around them, what they learn, and their communication preferences and interpersonal skills are all influenced by their backgrounds which contribute towards the learning experience. For instance, some cultural norms uphold strict hierarchical structures that discourage open questioning or the critique of elders. This discouragement could present in a complex manner within the learning environment where a student may need to raise a query or critique an educator as part of learning inquiry. Culture saturates learning and cultural competence needs to be developed when designing learning experiences (McLoughlin & Oliver 2000; Rogers, Graham & Mayes 2007). It is one of the essential components of a student-centred learning environment that allows students to learn in a way that is in alignment with their values, learning styles, beliefs, and preferences (Chen *et al.* 2025).

Exacerbated by the processes of globalisation, diverse student populations increasingly encounter barriers to accessing global networks. In response, the preservation of cultural identity has gained prominence within globalisation discourse, emerging as a critical component of sustainable development, particularly within the context of the creative industries (Moalosi, Setlhatlhanyo, & Sealetsa 2016). When diversity among a community is acknowledged, the core of culture promotes inclusive and pluralistic participation within the educational landscape as well as the economy. When viewed as a driver, cultural preservation enables the development of sustainable practices that promote intergenerational knowledge transfer, innovation and creativity, resulting in solutions that are culturally and contextually relevant (Van Boeijen, Sonneveld & Hao 2017). Despite this, Durie (2005) mentions that because of the country's colonial past (and to some extent globalisation), indigenous cultures have been undermined in the progression towards a transformative learning environment. The call for design education transformation, rooted in diversity and multiculturalism requires careful consideration of South Africa's complex educational contexts to ensure access to education for all students (Mampane 2019).

Design education: A cultural practice

Economic, political, and historical contexts shape our understanding of education and, by extension, the role of contemporary design education (Friedman 2025). Formal origins of design education is traced back to the 19th century, resulting as a product of industrialisation. Academic resources contentiously frame design education in relation to art education and art history. This close correspondence results in a broadly representational definition of design education as the study of how to apply principles and elements to communicate effectively. Mostly within visual applications. Shaped by cultural, technological and industrial influences, rhetoric explores it as the study of both the aesthetics and utility of objects encountered in everyday life (Zande 2010). Within this definition, educators and design practitioners engage daily with the conceptual foundations of both compositional design and functional design.

However, this explanation remains superfluous in nature and does not sufficiently engage with the deeper, more nuanced meanings embedded in contemporary South African design education. Towards the mid-20th century, design education expanded to include multiple disciplines, and design curricula experienced a paradigm shift from outcomes that sought solely creative expression towards human-centred, problem-solving and technical skills development. Designers are trained to consider not only the visual aesthetic of a product, but also its operational effectiveness and overall intended impact. Closer towards the late 20th and early 21st centuries, design education began to include interdisciplinary thinking, design thinking, innovation and human-centred design approaches.

Frascara (2017) indicates that to achieve best practice in design education, integration with social sciences is necessary, emphasising the importance of understanding human behaviour and cultural contexts in the design process. Contemporary design curricula often integrate challenges towards social impact, sustainable development and complex global issues as part of preparing students for participation within the global economy. Buchanan (1992) refers to this cross disciplinarity as a key competency needed to encourage a new type of thinking approach where design students can critically grapple with “wicked” problems.

Through the lens of design thinking, it is understood that human beings are inherently complex. When brought together in groups, they form communities that are even more diverse and multifaceted. As such, developing an astute understanding of the user through research and observation affirms that design education should extend beyond the domain of visual arts. This human-centred approach would involve careful attention to the social, cultural, and physical contexts in which the design is situated, ensuring relevance, accessibility, and impact. Congruently, the literature emphatically presents design and human interest as being intrinsically linked (Chmela-Jones 2017), and therefore within this paper, design education is explored as a cultural practice (Van Boeijen, Sonneveld & Hao 2017) in so far as it has the potential to guide national identities, inform meaning making and impact on global exchange (Margolin & Buchanan 1995).

Human-centred design approaches in instructional design

Understanding culture in design practice is more than just becoming culturally aware. It entails understanding which aspects of culture are important to be aware of, why they matter and how to integrate them into a design outcome. Developing cultural competence is therefore a learning process (Van Boeijen, Sonneveld & Hao 2017). Contemporary design education emphasises the importance of understanding the user, resulting in a plethora of tools such as empathy maps, user personas, context mapping and user journeys prominent in design thinking methodology. And while there are tools aimed at understanding users in professional design practice, similar tools designed to develop cultural competence through instructional design are rare (Van Boeijen, Sonneveld & Hao 2017).

According to Rogers *et al.* (2007), the issue of culture is gaining interest in the field of instructional design and technology in that instructional designers themselves do not possess the requisite cultural competence to meet the needs of diverse students. However, this area is still met with much disillusionment, owing to instructional design being embedded in predominantly homogenous Western frameworks. While there are scholars who discuss culture within the context of instructional design, much of the work is drawn from social sciences with inferences made to instructional design. This in turn implies that instructional designers, as pedagogical practitioners, face a lack of culturally adaptive resources to design inclusive learning experiences. Rogers *et al.* (2007) notes that while little research exists on the cultural aspects of instructional design, several scholars have begun to unpack the issue.

Giger and Davidhizar's transcultural assessment model and its implications for design education and instructional design

Originally developed in 1988, Joyce Newman Giger and Ruth Elaine Davidhizar introduced the Transcultural Assessment Model to help nursing students evaluate, design, and deliver culturally sensitive care for patients from diverse backgrounds (Giger & Davidhizar 2002). The tool has since been used as an assessment to gauge patients’ cultural values on topics related to the healthcare their environment (Astuti & Alzate 2022). Rooted in transcultural nursing theories, the model provides a

guide for healthcare practitioners to become better acquainted with the cultural fabric of the community with which they are engaged (Karabudak, Tas & Basbakkal 2013). When applied to patients from diverse cultural and racial backgrounds, it aims to identify culturally appropriate care by nurses (Astuti & Alzate 2022).

Giger and Davidhizar's transcultural assessment model postulates that everyone is unique and can be assessed according to six cultural phenomena which influence their behaviour and engagement. These domains are listed as communication, space, social organisation, time, environmental control and biological variations (Giger & Davidhizar 2002; Karabudak, Tas & Basbakkal 2013; Astuti & Alzate 2022). The following section provides a brief overview of each domain within Giger and Davidhizar's Transcultural Assessment Model, exploring their relevance and potential application in design education. It is proposed that the model holds significant promise as a conceptual tool for instructional designers working in culturally diverse South African higher education contexts. By integrating these domains into instructional design practices, educators may foster greater cultural competence among design practitioners and promote more inclusive learning experiences.

Communication

Verbal and nonverbal communication is the foundation of human engagement (Dowd, Giger & Davidhizar 1998). The way in which we communicate, how and when we do so, is passed down from one generation to the next. For example, in some cultures, it is considered respectful to remain silent in the presence of an elder. In others, it may be customary to curtsy or bow, while in others, ululating and rejoicing are seen as expressions of respect. Similarly, nonverbal cues are considered cultural expressions. Where one culture may make use of animated hand gestures to communicate, another culture may find the act offensive. In a South African context simply using the word "yes" can carry nuanced meanings across different communities. "Yebo", "ja", and "ya-nee" are all variations of "yes" but each carry their own connotation, depending on the culture and communication exchange within which they are used. The relationship between culture and communication is inescapable and complex, and communication, both verbal and nonverbal is therefore one of the most significant ways in which culture is preserved (Giger & Davidhizar 2002).

Implications for design education

A deeper understanding of the student cohort is essential when designing instruction in South African design education. Applying design thinking methodologies can help educators and instructional designers uncover students' cultural backgrounds and contexts, informing appropriate tone, language, and communication styles. However, the diversity of the South African student body presents a challenge, making it difficult to cater to all learners without defaulting to a homogenised approach.

To enhance inclusivity, instructional designers must adapt communication strategies not only within learning instruction but also in interactions among students and between students and educators. For example, feedback processes should be culturally responsive to ensure meaningful engagement. A careful consideration to understanding students' preferred learning and communication styles is needed (Othman & Amiruddin 2010) and design educators as well as instructional designers should be encouraged to explore modes that can support more accessible and responsive learning.

Space

Space within Giger and Davidhizar's model refers to aspects of intimacy and distance when communicating. Simply put, it is the physical and physiological space which surrounds a person and includes their body and the surrounding environment. How individuals communicate with one

another falls on the domain of interpersonal space which is represented by four distinct zones: intimate, personal, social and consultative, and public. The premise here is that diverse individuals have different preferences for interpersonal space and, as described by Astuti and Alzate (2022), are largely influenced by culture. This phenomenon implies that nurses need to consider a patient's personal space when engaging with them to ensure they are comfortable with the level of engagement.

Implications for design education

In design education and instructional design, the concept of space extends beyond the physical classroom to include cultural perceptions of participation and personal boundaries. Feedback cycles, a core component of design education, require sensitivity to students' interpersonal preferences. For instance, while some may welcome public feedback, others may find it uncomfortable or intimidating. Similarly, educators may view intimate communication as supportive, yet some students could perceive it as intrusive. Similarly, collaborative work (common in design education) often involving close physical proximity. However, in diverse classrooms, some students may prefer greater personal space or avoid close interaction with peers of the opposite gender due to cultural norms. Recognising these differences is essential to fostering inclusive learning environments. Instructional designers and educators can accommodate varied preferences by offering multiple feedback formats, such as public critique, written reviews, or private consultations. By considering cultural and spatial sensitivities, instructional designers can ensure that all students participate comfortably and meaningfully throughout the learning process.

Social organisation

The way a group organises itself around a given community or family group is considered social organisation (Giger & Davidhizar 2002). The community, made up of family, tribal, racial, ethnic, and other special interest groups lay the foundation for values, beliefs, communication experienced in human interaction and diverse cultural practices.

Implications for design education

In educational contexts, social organisation refers to the relational structures and interactions that shape how students learn. In design education, these structures may be formal, such as hierarchical relationships between students and academic staff, or informal, shaped by institutional culture and cohort dynamics. Students' engagement with these structures often varies according to cultural background; some may adhere to formal hierarchies, while others may challenge or disregard them. Similar dynamics exist between educators and student groups within the design studio environment.

Social organisation also encompasses socialisation and community engagement. In collaborative project settings, students from diverse backgrounds bring varied expectations and norms. Understanding how culture influences group dynamics is essential to fostering inclusive participation and reducing barriers to engagement. Instructional designers must consider how students interact with learning materials and each other, especially in activities requiring collaboration.

Cultural sensitivity in this domain equips educators with tools to support diverse student groups more effectively. By acknowledging and accommodating different social norms, educators can create learning environments that promote equity, reduce conflict, and enhance student engagement.

Time

This phenomenon describes how time orientation impacts an individual's interpersonal communication. Individuals can have past, present or future time-orientations. Those who are focused on the past, tend towards more traditional behaviours and are not interested in forward planning. Individuals who are present-orientated do not look to the past or plan whereas future-oriented individuals are driven by achieving future goals (Astuti & Alzate 2022).

Implications for design education

Design students may vary in their orientation toward time. Some are present-focused and prefer to manage one task at a time, while others are future-focused and excel at planning and time management. Challenges arise when curricula assume a uniform time orientation, often favouring future-focused learners. Instructional designers can address this by pacing activities to accommodate both present and future orientations. For past-focused students, reflective tasks may enhance engagement. Additionally, scheduling around major cultural holidays is an important consideration for inclusivity. Recognising diverse time orientations and cultural calendars allows instructional design to be more responsive to the needs of a multicultural student body.

Environment control

Within Giger and Davidhizar's model, environmental control refers to the individual's ability to control nature and to plan the environment which affects them and considers internal control as well as external control (Giger & Davidhizar 2002). In certain cultures, students may observe hierarchical structures by remaining quiet and listening passively to the educator. Whereas diverse cultures may consider open dialogue, robust discussion and debate as the norm. Multicultural contexts such as these may present a challenge to encouraging an inclusive and collaborative classroom environment.

Implications for design education

Design educators can challenge traditional hierarchies by reshaping the learning environment into a more collaborative space. Rather than using forward-facing seating arrangements, educators might group students to encourage peer-to-peer interaction and social engagement. This shift promotes inclusivity and supports diverse learning preferences. Additionally, replacing conventional feedback mechanisms with peer-review tools can decentralise authority in the classroom. By doing so, educators foster a more participatory and supportive environment, where students feel empowered to contribute and engage meaningfully.

Biological differences

Individuals from diverse cultural groups may have different experiences due to inherited physical and genetic traits which influences how appropriate care is designed. In nursing, a diabetic or pregnant individual will receive distinctly different care to individuals with other diagnoses. Although this is quite complex within the context of South Africa, the model suggests that having a baseline understanding of an individual's genetic background brings with it the ability for a care professional to have a better understanding of a given cultural background to provide appropriate care (Giger & Davidhizar 2002).

Implications for design education

This phenomenon can be broadly applied to design education. Students with attention deficit disorders may struggle to concentrate on lessons for prolonged periods of time. Design educators may mitigate this by offering regular breaks in between learning activities. Similarly, instructional designers

may could consider alternating between theoretical learning and practical application to maintain student engagement.

Limitations

Giger and Davidhizar's transcultural assessment model offers a valuable framework for design practitioners seeking to integrate culturally responsive approaches into instructional design. While the model is traditionally defined within the healthcare context, its application in design education presents unique opportunities to guide cultural competence through evaluative decision-making. Design thinking, through iterative prototyping and empathetic engagement with student contexts, provides a human-centred methodology for exploring this integration.

Further research is needed to examine how existing instructional design frameworks contribute to the development of cultural competence. This exploration could help bridge the gap between inclusive pedagogy and culturally attuned curriculum design in South African higher education.

Conclusion

Design education is inherently connected with culture (Williams & Rieger 2016). The multicultural context of South African design students implies that a different pedagogical approach is needed to assist design education stakeholders understand the complexity of culture and how it is needed to develop students' critical thinking skills and engagement (Williams & Rieger 2016).

This paper proposed that Giger and Davidhizar's transcultural assessment model, originally developed for nursing education, holds potential as a conceptual tool for fostering cultural competence in South African design education. The model's six domains (communication, space, social organisation, time, environmental control, and biological variations) offer valuable insights into designing inclusive learning instruction that respond to the complexities of a multicultural student body.

The model's principles align with human-centred design thinking and provide a foundation for culturally responsive pedagogy. Each domain highlights specific considerations for instructional designers, from adapting communication styles and feedback mechanisms to recognising diverse time orientations and social structures.

The applicability of Giger and Davidhizar's transcultural assessment model in design education remains conceptual at this stage. However, its integration presents a promising avenue for enhancing cultural awareness and inclusion in curriculum and instructional design. Future research should explore empirical testing of the model within instructional design contexts, assess its compatibility with existing frameworks, and investigate its role in shaping culturally competent design educators and practitioners.

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