University-Community Engagement: Challenges and Mitigation Strategies. A Systematic Literature Review and Future Research Directions

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ABSTRACT

As a critical function of higher education, community engagement should contribute to solving societal challenges, foster sustainable development, and advance social equity. The article examines the barriers and strategies for effective university-community engagement, focussing on public universities in Namibia and the Republic of South Africa. Based on a systematic review carried out with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, 600 records have been analysed, and only thirty-one studies published between the years 2014-2024 were included in the final synthesis. Through the review, some relevant challenges were identified, namely: lack of resources, misaligned objectives between university and community, and resisters among stakeholders. The review also reveals that the co-creation model can mitigate all these barriers through capacity-building initiatives, institutional policy reforms to promote engagement, and the application of digital technologies. The contextually relevant frameworks that fit the African cultural contexts are Ubuntu and ABCD, while globally adaptable scalable approaches are Transformative Engagement and Sustainable Livelihoods. Longitudinal research approaches are referred to and thus called for inclusion in this paper, as well as comparative analysis and incorporation of Indigenous knowledge systems in such a way as to develop more inclusive and sustainable approaches toward engagement. These findings position universities as active agents of systemic change through concrete insights into how university partnerships with the community can be constituted and strengthened in light of global development.

Keywords: University- community engagement, challenges. strategies

INTRODUCTION

Community engagement is increasingly understood to be a core function of higher education, reflecting the extended role of universities in light of societal challenges. Beyond traditional university mandates for teaching and research, universities are being called upon to contribute to sustainable development, social equity, and community empowerment through collaborative partnerships (Carnegie Foundation, 2020; Nicolaides & Austin, 2022; Watson et al., 2021). Such alliances allow universities to contribute to socio-economic development, cultural preservation, and community resilience (Bhagwan, 2017; Mtawa & Wangenge-Ouma, 2021). Given the historical inequities and socio-economic disparities in the African context, it prioritises the urgency of community engagement. Moreover, Namibia and the Republic of South Africa (RSA) public higher education institutions can make a considerate difference by connecting their institutional capacities with compelling community needs. Many are also called upon to deal with the aftermath of colonialism and apartheid, which created inequities in education, healthcare, and economic opportunities (Cele & Adewumi, 2024; Daniels & Adonis, 2020; Molepo & Mudau, 2020; Machimana et al., 2020)

Given the above historical disparities, community engagement initiatives must be integral to community

engagement initiatives, especially with universities, aligning their missions to national development priorities and international frameworks such as the United Nations' Sustainable Development Goals (SDGs) (Francis et al., 2016; Petersen & Kruss, 2021). Public universities in Namibia and the RSA offer two very different but intertwined contexts where the challenges of university-community engagement can be observed. While both countries have placed community engagement at the centre of their higher education policies, public universities within these countries are facing many challenges. Resource constraints, including underfunding and a lack of infrastructure, hinder scaling up and sustaining community engagement programs. For instance, studies conducted at the University of Namibia (UNAM) showed significant logistical challenges, particularly in rural areas with poor connectivity and no transportation, making outreach difficult (Mawonde & Togo, 2019). Similarly, universities in the RSA cannot claim to successfully balance community engagement with other competing institutional priorities such as research output and student enrolment (Smith-Tolken & Bitzer, 2017; Mtawa & Wangenge-Ouma, 2021).

Problem Statement

Notwithstanding the transformative potential of university-community engagement, systemic barriers stultify its effectiveness and sustainability in Namibia and the RSA. Chronic underfunding is among the issues that is recurring; most public universities depend on grants from elsewhere to finance projects in the form of engagement. This kind of financial dependence creates a set of fragmented, short-term programs that are bound not to result in long-term benefit outcomes. For instance, UNAM has, over the years, had some severe resource constraints in the rural health outreach programs; a lack of consistent funding has hampered the scale and continuity of initiatives meant to improve maternal and child health (Mawonde & Togo, 2019). The resulting misalignments weaken trust and the value of university-led initiatives for community stakeholders.

The opposition of stakeholders adds another layer of complexity to the challenge. Many faculty view community engagement as peripheral to teaching and research responsibilities because it is not institutionally rewarded and valued in tenure and promotion processes. The teaching and research responsibilities have been recorded at institutions such as the University of Cape Town (RSA), where the faculty participants indicate that the imperatives of academic life more often than not overshadow the engagement activities, thus undervaluing and under-prioritising them (Mtawa & Wangenge-Ouma, 2021). On the community side, historical mistrust or perceptions of extractive practices often fuel resistance. In rural South African communities, for instance, university-led projects have sometimes been criticised for failing to incorporate local knowledge systems or appearing alien to the community's lived experiences, fostering scepticism and disengagement (Omodan et al., 2019).

The absence of standardised frameworks and evaluation metrics further exacerbates these challenges. Without robust mechanisms through which the impact of particular initiatives in engagement is effectively assessed, universities cannot succeed in refining their strategies, let alone justifying investing resources. A study at the University of the Free State (UFS) (RSA) exposed the lack of systematic approaches for monitoring and evaluating engagements; fragmented efforts were far from achieving long-term goals (Smith-Tolken & Bitzer, 2017). Similar gaps have been recorded in Namibia, where the evaluation processes of community engagement projects have not set out any success metrics to enhance effectiveness and scalability (Mawonde & Togo, 2019). These challenges have brought out the need for sustainable funding models, alignment of university and community objectives, and formulating a framework for consistently measuring impacts. Addressing these issues has become cardinal in positioning Namibian and South African universities as agents of transformative social change through meaningful and effective community engagement. In light of the above challenges and as a contribution to the development of effective and sustainable university-community engagement practices, this systematic review is guided by the following objectives.

Objectives of the Article

This article endeavours to:

1. Explore the key challenges that retard the sustainability and effectiveness of university-community engagement initiatives in Namibia and the Republic of South Africa.

2. Explore some region-specific and global strategies that successfully address the identified constraints.

3. Propose mitigations for improving community engagement that are actionable and aligned with achieving institutional goals and societal needs.

Significance of the Article

This article contributes to the academic debate on community engagement through the critical gap in the literature regarding the unique challenges faced by public universities in Namibia and the RSA. This research anchors the complexity of community engagement into the historical settings of marginalisation and socio-economic disparities within these regions. Also, it contextualises its findings in light of global frameworks such as the Sustainable Development Goals (SDGs) to chart a roadmap of how engagement initiatives can be scaled up across diverse settings.

The insights emanating from this systematic review are relevant to policymakers, university administrators, and community stakeholders. For instance, evidence from the University of the Free State (UFS) in the RSA shows how institutionalised policies might incentivise faculty engagement and align it with broader strategic objectives (Petersen & Kruss, 2021). Similarly, lessons from the University of Namibia (UNAM) point toward integrating Indigenous knowledge systems to make interventions culturally relevant and community-owned. The strategies of the UFS and UNAM can promote community-university engagement for the advancement of the university and the community. However, more strategies through the primary data-based article can offer additional strategies to contribute to optimum university-community engagement. Scholars agree to synthesise these messages into practical recommendations to reinvigorate the role of public universities as drivers of social change (Mawonde & Togo, 2019; Nicolaides & Austin, 2022).

LITERATURE REVIEW

Conceptualizing Community Engagement

Community engagement in higher education involves a collaborative process to solve problems within the community, create mutual learning opportunities, and foster sustainable development where higher education institutions collaborate with communities. The Carnegie Foundation defines community engagement as a collaboration between university knowledge and resources with those of the public and private sectors to enhance civic responsibility and address societal issues in the service of the public good (Carnegie Foundation, 2020). This dual mission underlines the need to advance institutional goals hand in hand with meeting community-defined needs.

In the African context, community engagement tends to become an instrument of addressing socio-economic inequities and promoting development. Frameworks such as Ubuntu are underpinned by interdependence, mutual respect, and collective responsibility, providing a culturally located perspective on engagement (Nicolaides & Austin, 2022). Community engagement has become an institutional priority globally, with models such as the Carnegie Classification and the Talloires Network advancing engagement as a core academic function. These frameworks stress aligning university activities with societal goals, fostering innovation and societal impact (Watson et al., 2021).

Universities in Namibia and the RSA are strategically positioned to solve systemic problems emanating from apartheid and colonialism. Some national policies, such as the Higher Education Quality Committee (HEQC) of the RSA, require universities to engage, making it the core university mission and aligning institutional priorities with national development goals and international agendas such as the SDGs of the United Nations (Mawonde & Togo, 2019). Community engagement in the RSA and Namibian higher education has increasingly been incorporated into policies to redress historical inequity and address socio-economic concerns. For instance, the Higher Education Quality Committee standards present community engagement as the third key function, aside from teaching and research, and stress their contribution towards sustainable development and national growth. Beyond that, adaptive leadership frameworks also seem to foster shared ownership among community engagement projects adopted at RSA universities since there is joint learning between students and communities.

Tsotetsi et al. (2022). However, policy institutional alignment has specific critical gaps regarding the realignment of policies following open and participative policy practices. Theoretically, communities can thus approach university-led initiatives very sceptically against a background characterised by inept or extractive projects of old. This was indeed the case at the University of Pretoria in the RSA; it has since overcome such concerns by embedding community engagement in academic modules, as witnessed during the COVID-19 pandemic when students designed virtual tools and resources to meet community needs (Jordaan & Mennega, 2021).

Moreover, the 1997 White Paper on the Transformation of Higher Education, other policy frameworks and successive HEQC accreditation, including Criterion 18, which emphasises systematic planning and evaluation for community engagement, have played a key role. These frameworks aim to make community engagement measurable and embedded in the academic missions of universities. The University of Namibia has also aligned its strategic objectives with these imperatives by integrating community-based service learning into its curricula (Nhamo, 2019). In the South African context, research accentuates relational dynamics between universities and their communities based on mutual respect and co-creation of knowledge. The University of KwaZulu-Natal is one of those that has been successful in fostering these kinds of reciprocal partnerships; for example, through a project like Tackling Infections to Benefit Africa (TibaSA), which places dialogic interaction and knowledge plurality at the centre of activity (Mutero & Chimbari, 2021).

These cases give meaning to the call for robust policies and frameworks that institutionalise community engagement as a sustainable, measurable, and impactful component of higher education. They also reflect the transformational potential of aligning institutional capacities with the urgent needs of local communities.

Challenges in Community Engagement

Institutional Barriers

Public universities in Namibia and the RSA are highly resource-constrained in implementing and sustaining community engagement activities. The scarcity of funds, infrastructural deficits, and competing priorities within the institution lead to fragmented programs that have little likelihood of longevity in the long term (Bhagwan, 2017; Mtawa & Wangenge-Ouma, 2021). Globally, universities in low- and middle-income countries face similar challenges. For instance, the resource-constrained programs and institutions found across many countries in Southeast Asia and Latin America are often highly dependent upon the support of international donors to finance Community engagement activities (Petersen & Kruss, 2021).

Unaligned Goals

Throughout universities' efforts to be involved in community activities, many face the challenge of conflicting objectives between institutions and respective service communities. While African universities often focus on academic outputs, such as research outputs, communities may require more immediate benefits associated with their basic needs, including health and education (Francis et al., 2016; Nicolaides & Austin, 2022). This has been documented worldwide, including in rural parts of India, where most academics and their projects have failed to address urgent livelihood matters effectively and needs within the community, thus building trust and cooperation (Watson et al., 2021). There is a need for co-creation models to address this misalignment that balances institutional goals with community priorities, which has been done successfully in various participatory action research projects in Africa and Southeast Asia.

Communication Gaps and Trust Deficits

Communication lies at the heart of trust-building processes and collaboration efforts in Community engagement initiatives. However, universities in Namibia and the RSA often battle to transcend the cultural and linguistic divide, and academic jargon or formalised processes alienate community stakeholders (Musesengwa & Chimbari, 2017). The cultural and linguistic divide, and academic jargon are not unique to the African continent. In Latin America, there have been similar issues concerning the inability of engagement projects to express themselves in understandable terms throughout the various rural areas with a predominance of indigenous languages (Francis et al., 2016). Best practices in global trends insist on participatory evaluation frameworks

incorporating community feedback that foster inclusiveness and transparency.

The legacies of colonialism and apartheid in the RSA and Namibia, therefore, led communities to regard university-led initiatives with scepticism, seeing them as either extractive or elitist. This historical mistrust has parallels with challenges faced by universities in Indigenous contexts in both Australia and Canada, where community members resist engagement because of similar histories of exploitation (Watson et al., 2021). These trust deficits only underscore the importance of culturally sensitive frameworks such as Ubuntu, which focus on reciprocity and shared ownership.

Frameworks for Mitigation

Ubuntu Framework

The Asset-Based Community Development (ABCD) framework shifts the focus from community deficits to strengths, underlining the importance of identifying and using local assets such as skills, networks, and cultural resources. This strength-based approach has been applied in rural Namibia to improve educational outcomes, mainly through teacher training programs utilising local expertise (Bhagwan, 2017). Meanwhile, universities in the RSA have adopted ABCD to empower women-led cooperation to contribute to economic independence and social cohesion. Mawonde and Togo (2019) described ABCD's implementation in rural areas in India and Kenya to improve healthcare delivery through training for community health workers. These are examples of the adaptability of ABCD to a wide range of socio-economic contexts. Therefore, they offer important lessons for scaling the framework in other resource-constrained settings.

Asset-Based Community Development (ABCD)

The ABCD framework shifts the focus from community deficits to strengths, emphasising identifying and utilising local assets such as skills, networks, and cultural resources. This strengths-based approach has been applied in rural Namibia to improve educational outcomes, mainly through teacher training programs utilising local expertise (Bhagwan, 2017). Similarly, South African universities have applied ABCD to empower women-led cooperatives, contributing to economic independence and social cohesion (Mawonde & Togo, 2019). ABCD has been implemented in rural India and Kenya to improve healthcare delivery by training community health workers. These are examples of the adaptability of ABCD to a wide range of socio-economic contexts. Therefore, they offer important lessons for scaling the framework in other resource-constrained settings.

Sustainable Livelihoods Framework (SLF)

The SLF integrates economic, social, and environmental dimensions of development, focusing on enhancing community resilience. Universities in Namibia and the RSA have applied the SLF to rural development projects, such as income-generating activities for women and youth. By prioritising local capabilities and access to resources, the SLF has addressed systemic challenges like unemployment and poverty (Mawonde & Togo, 2019). This framework has also received significant attention globally. In Bangladesh, for instance, the SLF has guided university-led initiatives in developing better agricultural practices, emphasising community participation and environmental sustainability. Such cross-regional applications underline the SLF's versatility and relevance to African and global contexts.

Transformative Engagement and Technology-Driven Frameworks

Transformative engagement is an approach that shifts focus away from transactional projects, which are short-term, to systemic partnerships that deal with structural inequities toward social justice. In South Africa, transformative engagement has been a strong driver of inclusive education and poverty reduction, aligning university efforts with the SDGs through Petersen and Kruss (2021). Technology-driven frameworks complement the above approach by using digital means to overcome logistical obstacles and scale engagement efforts. For example, ODL platforms have been highly instrumental in improving health education at the University of Namibia for rural areas (Mawonde & Togo, 2019). Digital technologies have played a pivotal role in sustaining engagement during crises such as the COVID-19 pandemic. Universities in Europe and North America used virtual platforms to maintain community partnerships, offering scalable models that African

universities can adapt. However, addressing the digital divide remains a critical challenge, particularly in rural and underserved areas.

DATA COLLECTION

Database Selection

The article delimitated four major databases covering a broad scope of material, including peer-reviewed and grey literature data in Scopus, Web of Science, Google Scholar and PubMed. The decision to use only four databases as identified for this systematic review is justified based on their relevance, comprehensiveness, and specific focus. First, the databases selected are highly relevant to the research topic, addressing community engagement and higher education themes, particularly within the African context. Systematic reviews prioritise the inclusion of sources from databases that provide domain-specific coverage (Booth et al., 2021). Databases related to education and social sciences would also be applicable for investigating challenges and strategies related to community engagement at universities in Namibia and South Africa.

Firstly, Scopus was beneficial for its comprehensive, multi-discipline coverage of high-quality peer-reviewed literature (Elsevier, 2020). Secondly, Web of Science gives access to high-impact factor journals across various disciplines (Clarivate, 2021). Thirdly, the researchers found Google Scholar helpful, allowing access to grey literature (conference proceedings, institutional reports, etc.) that are generally not listed in traditional indexes (Halevi et al., 2017). PubMed was explicitly included for its relevance to studies examining health-related aspects of community engagement, particularly in African contexts (NCBI, 2022).

Search Strategy

A broad search strategy was developed using Boolean operators and keywords to build search strings that effectively balance sensitivity and specificity in this area. Such search strings included the following:

1. "community engagement challenges" AND "public universities"
2. "university-community partnerships" AND "Republic of South Africa" OR "Namibia")
3. "mitigation strategies" AND "higher education."

However, these align with the thematic focus on challenges, strategies, and regional contexts of community engagement in Namibia and the RSA public universities. The search, "Community engagement challenges" AND "public universities above, " is a phrased focused search question within this systematic review, setting out some challenges that public universities face while engaging communities. Key phrases-"community engagement challenges" and "public universities"-ensured the results focus on crossing institutional challenges with community-related efforts, hence in line with this systematic review investigating the barriers to effective engagement in such a context.

Including "mitigation strategies" ensured that the review identifies actionable interventions and solutions, something quite central to the article's goal of recommending strategies for bridging community engagement gaps. According to Petticrew and Roberts (2006), search strategies should explicitly target the intervention or solution in systematic reviews to ensure practical relevance.

Boolean operators like "AND" and "OR" allowed for the search specification for precision and breadth. The word "AND" will narrow the search to only those studies that contain both concepts. At the same time, "OR" expands the scope to include alternative terms representing what must be considered so as not to miss anything relevant. Filters, such as language and institutional focus, were used to refine the results further. In line with Page et al. (2021), this systematic review also preferred publications from 2014 through 2024 for relevance in the contemporary context. Because of limited resources and the practicalities of translating non-English studies, only English language studies were to be included in this review. In terms of institutional focus, targeting public universities was crucial to meeting the objectives in the article. The overall hits for all databases summed to 600 articles. After duplicate removal and initial screening, 150 records were reviewed in full-text form, from which the final inclusion was narrowed to 31 articles.

Inclusion and Exclusion Criteria

Petticrew and Roberts (2006) emphasise the importance of explicit inclusion and exclusion criteria in systematic reviews, noting that these criteria are critical for ensuring that only studies relevant to the research questions are selected. They argue that well-defined criteria provide a logical framework for the systematic review's selection, enhancing its methodological rigour and ensuring alignment with the article's purpose. As such, in this article, the inclusion and exclusion criteria ensured that systematically selected studies would be reviewed logically with the purposes of the research as instructed or warranted below:

Inclusion Criteria

1. Public Universities: All related studies involved in community engagement in Public Higher Education Institutions.

2. Relevance to Challenges or Strategies: It addresses challenges, mitigation strategies, or theoretical engagement frameworks.

3. Methodological Quality: Peer-reviewed articles or reviews utilising explicit methods with robust data analysis, guided by Gough et al. (2017).

4. Contextual Relevance: Preference was given to studies conducted in Namibia, Republic of South Africa, or other comparable settings, although globally relevant findings were also included.

5. Publication Criteria: The review prioritised studies published in English between 2014 and 2024.

Exclusion Criteria

Studies that were excluded were those dealing with private universities or non-academic institutions. Furthermore, studies that did not address community engagement or failed to provide empirical evidence, like editorials or opinion pieces, were also excluded. Lastly, non-English studies were also excluded, which was a result of the resources that were used to effect proper translation. The above was identified as a limitation, which is discussed later in the article.

Thematic Analysis

Thematic analysis was performed to identify and combine the insights from the selected studies. The current analysis followed the framework of Braun and Clarke (2006) based on familiarisation and coding, development of themes, application of framework and validation. The process of thematic analysis is detailed in the following paragraph.

The first step was the familiarisation and coding of data, which entailed a line-by-line analysis of each article to identify recurring concepts in the form of challenges and strategies, as well as identifying a theoretical framework. At this stage, consistency was sought using standardised codes developed from previous studies on thematic synthesis (Thomas & Harden, 2008). The second step involved the development of themes, which included combining codes to form broader themes. This process encompassed resource constraints, stakeholder resistance, co-creation strategies, and technology adoption. Following the development of themes, the application of a framework followed, where the researcher analysed the identified themes using theoretical frameworks such as Ubuntu, Asset-Based Community Development, and Transformative Engagement to bring out cultural and contextual relevance (Nicolaides & Austin, 2022; Petersen & Kruss, 2021). The validation process followed, which entailed validating the results, which two independent reviewers did. This phase included a cross-check of the coding and the development of the themes. In conclusion, the results were discussed, and decisions were made through consensus, which gave weight to the findings.

Limitations and Mitigation Strategies

The review has included only studies in the English language. This is primarily due to practical reasons, which

include resource constraints on translation. This may have excluded relevant studies published in African indigenous languages or other non-English speaking contexts. Multilingual databases can be explored for future studies, and appropriate translation tools can be used to include results.

The search strategy also included grey literature through Google Scholar, which introduces potential variability in methodological rigour. Grey literature was carefully screened for relevance, credibility, and methodological transparency to minimise this. For instance, grey literature was considered only from reputable sources, such as institutional reports or conference proceedings, and whose methodologies were clearly described. Although Scopus, Web of Science, Google Scholar, and PubMed provided broad coverage, studies indexed in regional or specialised databases, such as African Journals Online (AJOL), may have been excluded. This limitation was partially mitigated by manually screening reference lists of included studies to identify additional relevant sources. The themes identified were validated independently by multiple reviewers for robustness. Additionally, findings were cross-checked with theoretical frameworks to ensure alignment and relevance. These steps ensure the reliability and applicability of synthesised themes.

PRISMA Flow Diagram

A PRISMA flow diagram, Figure 1, visually displays the article selection process to present findings more transparently and reproducibly (Page et al., 2021). The flow diagram summarises the following steps: (1) Identification, Screening, Eligibility and Inclusion, as such:

1. After removing 50 duplicates, 600 studies were screened for relevance based on their titles and abstracts.

2. Of 600 records reviewed, 50 were eligible to meet the inclusion and exclusion criteria.

3. The final synthesis included 31 studies that met all methodological standards and addressed the article's objectives.
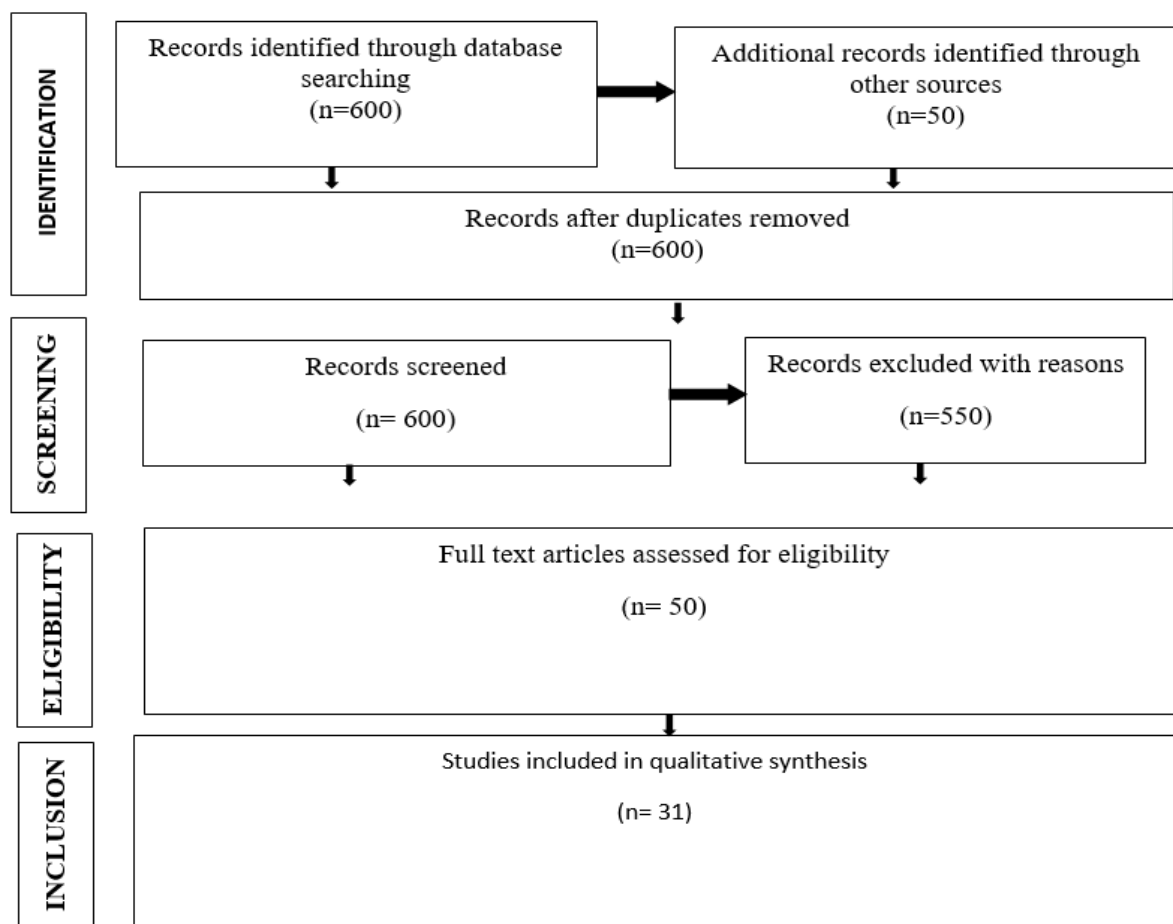

Figure 1: PRISMA Flow Diagram

RESULTS AND DISCUSSION

This section offers the results and discussions based on the reviewed literature on PRISMA.

Challenges Identified

Resource Constraints and Logistical Barriers

Some significant challenges for community engagement efforts in the case of Namibia and the RSA public universities include a lack of financial, infrastructural, and human resources. The literature reviewed also reveals that several universities in Namibia and the RSA consider core academic functions such as teaching and research far more critical than any engagement initiatives; underfunding and fragmented programs have thus been a hallmark of this type of initiative (Bhagwan, 2017; Mawonde & Tongo, 2019; Petersen & Kruss, 2021). For instance, many such initiatives suffer from serious scalability and impact challenges arising from the logistical issues of not being well served by transportation or digital infrastructure in most parts of rural Namibia (Mawonde & Togo, 2019). Underfunding and fragmented programs have thus become characteristic of such efforts (Bhagwan, 2017). For instance, most initiatives in rural Namibia have to deal with many scalability and impact challenges because of logistical issues, such as limited transportation and inadequate digital infrastructure, which restrict their reach and effectiveness (Mawonde & Togo, 2019).

This trend is not unique to Namibia and South Africa. Still, it reflects broader challenges faced by institutions in the global South, particularly in regions of resource scarcity such as rural Latin America and Southeast Asia. Community engagement activities sometimes rely heavily on temporary external funding, dampening their sustainability and longevity. At the same time, logistics barriers impede such interventions' reach and effectiveness in other places (Petersen & Kruss, 2021). These parallels indicate a common problem of resource and logistical barriers across developing regions, with implications for innovative, locally adapted strategies that will guarantee sustainability.

Stakeholder Resistance and Trust Deficits

Stakeholder resistance and the trust deficit are significant challenges facing community engagement in Namibia and public universities in the RSA. Faculty often view community engagement as peripheral to their core academic work, mainly when there is no institutional incentive, such as recognition through promotion or tenure processes (Mtawa & Wangenge-Ouma, 2021). This perception is further embedded in a lack of transparent institutional policies and support structures that put community engagement front and centre and squarely within the core academic mission. Communities may also look at university-driven initiatives with suspicion due to negative experiences in the past from projects that were poorly executed or extractive. This is exacerbated further by cultural misalignments and power imbalances in the context of universities viewed as elitist or bereft of any linkage with rural realities (Smith-Tolken & Bitzer, 2017). The above evidence of stakeholder resistance and trust deficits underscores the critical need for universities to develop culturally sensitive and inclusive engagement practices to bridge trust deficits and foster meaningful partnerships with diverse communities.

Misaligned Objectives Between Universities and Communities

Misaligned objectives between universities and their communities present significant challenges to effective engagement (Francis et al., 2016; Nicolaides & Austin, 2022; Johnson, 2020; Peter & Kruss, 2021). Universities often prioritise research outputs and institutional reputation, while communities seek immediate, tangible benefits such as improvements in healthcare, education, and infrastructure (Francis et al., 2016). This divergence can lead to disengagement and project failure. For instance, specific university-led initiatives in Namibia have overlooked indigenous knowledge systems, reducing relevance and effectiveness (Nicolaides & Austin, 2022). Similarly, community engagement efforts in the RSA have sometimes failed to integrate local cultural practices, leading to limited community participation and support (Johnson, 2020). Petersen and Kruss (2021) note that such misalignments are not unique to southern Africa; in rural India, academic priorities often overshadow local livelihood concerns, further exacerbating community disengagement.

Mitigation Strategies: Challenge-Strategy Alignment

Several targeted strategies have emerged to address these challenges. The alignment of specific challenges with appropriate mitigation strategies is summarised in Table 1 and detailed below:

Table 1: Alignment of Challenges and Mitigation Strategies

Challenge	Strategy	Framework/Example
Resource Constraints	Capacity-Building Initiatives	Faculty training workshops in participatory methods (Bhagwan, 2017).
Logistical Barriers	Technology-Driven Solutions	Open and distance learning (ODL) is used in healthcare education (Mawonde & Togo, 2019).
Stakeholder Resistance	Culturally Sensitive Engagement	Ubuntu framework for trust-building (Nicolaides & Austin, 2022).
Misaligned Objectives	Co-Creation Models	Participatory action research in health outreach (Smith-Tolken & Bitzer, 2017).
Trust Deficits	Participatory Evaluation	Feedback mechanisms in community health projects (Musesengwa & Chimbari, 2017).

Capacity-Building Initiatives for Resource Optimisation

Capacity-building programs address resource constraints by building the capacity of university staff and community members to engage effectively. For example, faculty development workshops on participatory methodologies and project management were employed at universities in the RSA to have a significant effect (Bhagwan, 2017). The University of Namibia has further provided training for community health workers to sustain engagement initiatives autonomously (Petersen & Kruss, 2021). Furthermore, the University of South Africa (UNISA) has adopted participatory methodologies in its capacity-building programs. This approach reflects the broader findings that structured and context-specific strategies go a long way in improving community engagement efforts (Singh, 2015). Similarly, UNAM has emphasised the training of community health workers in rural areas, a process that also empowers the local communities. Further, academic planning should be integrated with practical, locally relevant community needs, according to the experiences of South African universities, for local challenges to be appropriately addressed and institutional goals to be aligned with societal needs (Nkoana & Dichaba, 2017).

Technology-driven Methods of Overcoming Logistical Barriers

Digital technologies offer scalable and affordable solutions to address logistics barriers to education and professional training. Among these technologies, the University of Namibia's open and distance learning platforms for expanding health professional training in rural areas by allowing students not to change residences or overdo travelling, which is crucial for resource-poor settings, Mawonde & Togo (2019). Similarly, tele-education programs in the RSA, like the one at the University of KwaZulu-Natal, have provided e-teaching since 2001, thus making continuing medical education possible through video conferencing, among other ICT tools (Mars, 2014). Online workshops that universities in the RSA have used during the COVID-19 pandemic have helped keep students active and ensured continuity in learning. Such learning modes have reduced the immediate challenges that restricted physical interactions have presented and demonstrated the potential of digital education platforms for creating flexible and accessible learning environments (Ohmer et al., 2022).

More so, digital tools like telemedicine and mobile applications have continued to strengthen community outreach through real-time sharing and collaboration with academic institutions and resource-poor communities

(Ruxwana et al., 2010). In such a line of thinking, e-learning frameworks designed for health professionals serving in the public sector have been of high value in continuing professional development where barriers such as time constraints and geographic dispersion are concerns (Gcora & Cilliers, 2016). These technology-driven approaches serve the dual purpose of overcoming logistic obstacles and ensuring inclusivity through multilingual content, video captioning, and interactive modules. Such innovations ensure that a diverse range of learners in remote areas also have access to high-quality education. As digital infrastructures expand and ICT tools become more accessible, such methods will likely feature at the forefront of changed education and training paradigms in Namibia, the RSA, and beyond.

Culturally Sensitive Frameworks to Build Trust

The Ubuntu framework insists on mutual respect and interdependence, engendering trust and shared ownership of processes within historically marginalised communities. Such a culturally embedded approach has been fundamental in South Africa, guiding agricultural projects that bring together indigenous and modern practices (Nicolaides & Austin, 2022). Similar frameworks in Indigenous contexts illustrate the scalability of culturally sensitive strategies. The Ubuntu framework promotes mutual respect, interdependence, and shared ownership to build trust within communities that have been historically oppressed. As a culturally embedded approach, this has proved transformative in South Africa, with agricultural projects attempting to merge indigenous knowledge systems with the latest methodologies for sustainability and inclusiveness (Kubow & Min, 2016). These projects aim to develop environmental resilience and promote local people's empowerment through a combination of traditional methods, such as water conservation techniques and crop rotation, along with scientific progress (Kaya & Chinsamy, 2016). It is evident that culturally sensitive frameworks, like Ubuntu, underpin sustainable development and reinforce community identity and cohesion. These strategies ensure that all development projects stay within the local contexts by applying Indigenous principles to develop more inclusive and resilient systems.

Co-Creation Models for Alignment of Objectives

Co-creation is about equal collaboration in designing, implementing and evaluating projects between the university and the community. The participatory action research methodologies used in Namibia and South Africa often successfully align university objectives with community priorities in specific health outreach programs (Smith-Tolken & Bitzer, 2017). Co-creation thus emphasises equal design, implementation, and evaluation collaboration between universities and communities. Participatory Action Research (PAR) methodologies employed by universities in Namibia and South Africa have recorded remarkable success in aligning academic objectives with community needs, especially in health outreach programs (Smith-Tolken & Bitzer, 2017).

In South Africa, Stellenbosch University utilised PAR to enhance the learning experience of medical students in rural district hospitals. By facilitating collaborative reflection and action among students, educators, and clinicians, the approach led to tailored interventions that improved workplace-based training and helped bridge gaps in healthcare delivery (von Pressentin et al., 2016).

Another important initiative in the RSA, the Verbal Autopsy with Participatory Action Research (VAPAR) program in Mpumalanga, aimed to address rural health challenges by generating locally relevant evidence and cooperative planning between the community and healthcare authorities. Such collaboration resulted in more appropriate health service delivery and community-health system partnerships (van der Merwe et al., 2021). The abovementioned initiative illustrates how Namibian and South African universities use co-creation and participatory methods to address specific local challenges. Such initiatives create sustainable and culturally appropriate solutions that enhance research impact and community well-being by ensuring equal input from academic and community stakeholders.

Participatory Evaluation to Overcome Trust Deficits

Transparency and inclusion can be well ensured through community voices represented through participatory evaluation mechanisms. Feedback loops are used by various rural health initiatives in Zimbabwe and South

Africa to refine engagement strategies to build trust and collaboration in service delivery, as seen by Musesengwa and Chimbari (2017). The principles of Participatory Evaluation prove quite an important tool that contributes immensely to trust among agencies or other institutions with particular relevance within environments or contexts that record incidents related to historical inequity or breaks in the fabric of service provision. With representation from within a given setting, Participatory Evaluation develops to be highly regarded and embedded in practice at virtually every level. Consequently, building mutual respect is grounded upon accountability for joint partnership processes.

In the RSA, various participatory methods have been implemented in health-related ventures, especially in engaging the voices of rural communities. An example is the VAPAR programme in Mpumalanga, which is instructive in the strength of feedback loops in building community trust. Through iterative cycles of action and reflection, the program created spaces for community members and health authorities to collaboratively evaluate health service delivery and refine interventions based on local needs and feedback. This process improved service alignment with community priorities and strengthened stakeholder relationships (van der Merwe et al., 2021).

In rural districts, such as those supported by Stellenbosch University's Longitudinal Integrated Clerkship model, participatory approaches have been valuable in overcoming trust deficits in healthcare delivery. The university has promoted an enabling environment wherein community representatives and healthcare workers are involved in designing and evaluating tailored learning interventions that address local challenges while building long-term collaboration between the community and healthcare providers (von Pressentin et al., 2016). The discussion above provides evidence that participatory evaluation mechanisms can lead to increased transparency and help build trust and collaboration. Creating feedback loops that should be continually adjusted to community needs seems promising for public higher institutions in the RSA and Namibia to lay a path toward more effective and equitable service delivery.

CONCLUSION

The present systematic review identifies significant barriers that affect the sustainability and effectiveness of university-community engagement initiatives in Namibia and the RSA while providing recommendations that may mitigate the identified barriers. Resource constraints and logistical challenges, such as underfunding and lack of infrastructure, affect the scale and scope of community engagement. It optimises using minimal resources and ensures the program's sustainability through capacity-building programs like faculty development workshops or community health workers training (Bhagwan, 2017; Mawonde & Togo, 2019). Other technology-driven interventions are ODL platforms that improve access to education and professional training, fostering engagement through tele-education initiatives. These innovations help the logistical barriers and make the service more inclusive and flexible (Mars, 2014; Ohmer et al., 2022).

Resistance from stakeholders and trust deficits are still significant concerns from past inequities, cultural mismatches, and lack of transparent policies. Culturally sensitive frameworks, like the Ubuntu philosophy, go a long way toward engendering mutual respect and cooperation. These frameworks combine indigenous practices with the latest methodologies to ensure the initiatives resonate with the locals (Nicolaides & Austin, 2022; Kubow & Min, 2016). Additionally, participatory mechanisms of evaluation, such as feedback loops, allow for increased transparency and accountability to work on trust deficits and solidify relationships between the universities and the communities where they exist (Musesengwa & Chimbari, 2017)

This disengagement of objectives between universities and communities leads to project failure. The universities focus on research outputs, while the communities want tangible benefits in improved healthcare and education (Francis et al., 2016; Johnson, 2020). Co-creation models, such as participatory action research, ensure a level playing field in project design, implementation, and evaluation. The rural health training at Stellenbosch University and Mpumalanga VAPAR, among many others, have given way to this through institutional goal alignment with community priorities, thereby affecting relevance and impact (Smith-Tolken & Bitzer, 2017; von Pressentin et al., 2016; van der Merwe et al., 2021). Participatory mechanisms of evaluation are essential in ensuring sustainability and effectiveness. In incorporating community voices, they nurture transparency, build trust, and create space for continuous improvement. For example, experiences related to urban community health

workers at the University of Cape Town have shown how participatory evaluation enhances accountability and encourages shared responsibility (van der Merwe et al., 2021).

From the challenges and strategies identified, the following recommendations are offered to make university-community engagement projects more sustainable and effective in Namibia and South Africa:

1. To address the issue of lacking resource investments, universities should commit funds and infrastructures for community engagement projects through institutional core budgets and not temporary external funding sources alone (Bhagwan, 2017; Mawonde & Togo, 2019).

2. To ensure the expansion of capacity-building initiatives, faculty and community members will require training in participatory methodologies, project management, and co-creation models; capacity-building programs allow stakeholders to be enabled to engage in ways that are effective and can be sustained (Singh, 2015; Petersen & Kruss, 2021).

3. To mitigate logistical challenges through leveraging technology, there is a dire need to scale up the adoption of digital platforms to overcome logistics challenges and reach out to wider sections. These tools include ODL and tele-education facilities. Solutions should be available in multiple languages with integrated interactive modules that make the content inclusive (Mars, 2014; Ohmer et al., 2022).

4. Community engagement programs must adopt culturally appropriate frameworks such as Ubuntu to build mutual respect, shared ownership, and trust among the stakeholders. Program initiatives that combine indigenous knowledge systems with state-of-the-art practices are relevant and practical (Nicolaides & Austin, 2022; Kubow & Min, 2016).

5. The universities should focus more on co-creation and engage the community stakeholders in design, implementation, and evaluation steps. Participatory action research models, which align university objectives with community priorities, could enhance the relevance and effectiveness of such initiatives (Smith-Tolken & Bitzer, 2017; Johnson, 2020).

6. The introduction of robust feedback mechanisms will ensure that there is transparency and thus confidence in the universities by the communities; these have to be entrenched into the continuous structures of program improvement and accountability (Musesengwa & Chimbari, 2017; van der Merwe et al., 2021).

7. Through clear, transparent policies, universities should incorporate community engagement into their core missions. Recognition of community engagement within tenure and promotion processes can incentivise faculty participation (Mtawa & Wangenge-Ouma, 2021).

The article further points toward areas where further research should be conducted. Future studies must be longitudinal regarding assessments of the long-term impacts of engagement initiatives, comparative research across diverse regional contexts, and integration of Indigenous knowledge systems into scalable models of technology-supported partnerships. Besides, strong imperatives exist for reducing digital divides and assuring equity within technology-driven approaches to engagement in these diverse environments. The article underlines the resource constraints, stakeholder resistance, and misaligned objectives to mitigate with targeted strategies. Capacity-building initiatives, technology-driven solutions, culturally sensitive frameworks, co-creation models, and participatory mechanisms for evaluation present a broad approach to the identified obstacles. With such approaches, universities in Namibia and the RSA could better enhance sustainability, increase the impact of community engagement for aligning institutional goals with societal needs, and significantly contribute to national development and community well-being. A follow-up article based on primary data at the Namibia University of Science and Technology (NUST) can identify specific challenges and possible strategies in a Namibian higher educational environment. Furthermore, a comparative study regarding university-community engagement status at NUST and UNAM, Namibia's two public universities, can offer the status quo regarding university-community engagement in Namibia.

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