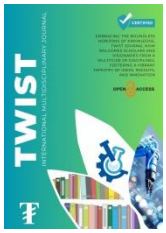
DOI 10.5281/twist.10049652#635
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TWIST, 2026, Vol. 21, Issue 4, pp. 69-71

TWIST

Journal homepage: www.twistjournal.net



Transdisciplinary Research Approaches in Knowledge Integration within Private Institutions in Uganda

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Abstract
Transdisciplinary research (TDR) is increasingly recognized as an effective strategy for tackling complex societal issues by bringing together different forms of knowledge. This study explores how transdisciplinary approaches support knowledge integration in private institutions in Uganda. Using a mixed-methods design, data were collected through questionnaires, interviews, and institutional document reviews from selected private universities. The results show that TDR strengthens cooperation between academic and non-academic actors, enhances institutional problem-solving abilities, and stimulates innovation. Despite these benefits, several constraints persist, including rigid institutional systems, insufficient stakeholder participation, and differences in knowledge perspectives. The study argues that well-structured frameworks for collaborative knowledge creation are critical for improving institutional effectiveness and social impact. It recommends policy adjustments and institutional reforms to enhance the adoption of transdisciplinary practices.

Keywords
transdisciplinary research, knowledge integration, private institutions, collaboration, innovation, Uganda

INTRODUCTION

Modern societal challenges such as improving education systems, ensuring sustainability, and enhancing institutional performance are becoming increasingly complex and interconnected. Addressing these challenges requires approaches that move beyond single-discipline perspectives. Transdisciplinary research (TDR) has therefore emerged as a comprehensive approach that combines academic insights with practical experience, local knowledge, and stakeholder input to produce relevant and applicable solutions.

In contrast to multidisciplinary and interdisciplinary approaches, TDR emphasizes joint knowledge creation involving various actors, including researchers, practitioners, policymakers, and community members. This collaborative orientation makes it particularly suitable for developing countries, where institutional problems are often multifaceted and deeply rooted in specific contexts.

Private institutions in Uganda continue to face challenges such as fragmented knowledge systems, weak research coordination, and limited engagement with industry and communities. These limitations restrict innovation and reduce the effectiveness of decision-making processes. Transdisciplinary approaches offer an opportunity to address these gaps by encouraging inclusive knowledge sharing and integration.

This study investigates the contribution of TDR to knowledge integration in private institutions and identifies both its benefits and limitations.

LITERATURE REVIEW

Understanding Transdisciplinary Research

Transdisciplinary research refers to a collaborative process that connects multiple disciplines with societal actors to address real-life problems. It involves shared learning, joint problem definition, and the integration of different types of knowledge (Scholz et al., 2024).

Core elements of TDR include: Combining academic and non-academic knowledge, Engaging relevant stakeholders throughout the research process, Focusing on complex societal issues. Additionally, TDR draws on diverse knowledge systems, including scientific, cultural, and experiential forms of understanding (Nuske, 2026).

Knowledge Integration in Institutional Contexts

Knowledge integration involves bringing together different sources of information to generate new understanding and solutions. In private institutions, this process typically includes: Theoretical and research-based knowledge from academia, Practical insights from industry practitioners and Context-specific knowledge from communities.

When effectively managed, knowledge integration improves innovation capacity, enhances decision-making, and strengthens institutional performance (Schneidewind et al., 2023).

Application of TDR in Private Institutions

Many private institutions are increasingly adopting transdisciplinary approaches to make their curricula more relevant, improve research productivity, and strengthen community outreach. However, several challenges hinder effective implementation. These include rigid institutional frameworks, limited financial support, and the absence of structured mechanisms for collaboration (Ohki et al., 2025).

METHODOLOGY

Research Design

The study adopted a mixed-methods approach, combining quantitative and qualitative techniques to gain a comprehensive understanding of transdisciplinary practices.

Population and Sampling

Participants included: Academic staff, Institutional leaders and administrators and External stakeholders such as industry representatives and community members

A purposive sampling strategy was used to select respondents from private higher education institutions in Uganda.

Data Collection Techniques

Data were obtained through: Questionnaires for quantitative insights, Semi-structured interviews for detailed perspectives and Review of institutional documents for contextual understanding

Data Analysis

Quantitative data were summarized using descriptive statistics such as frequencies and percentages. Qualitative data were analyzed thematically to identify key patterns and emerging issues.

RESULTS

Extent of Knowledge Integration

The findings reveal different levels of knowledge integration among institutions:

- 68% indicated a moderate level
- 22% reported a high level
- 10% experienced low integration

These results suggest that while integration efforts exist, they are not yet fully developed.

Contribution of Transdisciplinary Research

The study established that TDR contributes to; Improved collaboration across departments and with external partners, Enhanced capacity to address institutional challenges and Increased innovation and creativity. Respondents highlighted that jointly developed knowledge tends to be more practical and relevant to real-world situations.

Engagement of Stakeholders

Results show that:

- A majority (75%) of institutions involve external stakeholders
- Only 40% have formal systems guiding such collaborations.

This indicates that although stakeholder involvement is common, it is often informal and inconsistent.

Challenges Affecting Implementation

The study identified several barriers, including, Insufficient institutional support, limited financial resources, Conflicting perspectives across disciplines and Weak governance and policy structures. These challenges reflect broader difficulties in aligning different knowledge systems and approaches (Schneidewind et al., 2023).

Influence on Institutional Outcomes

Institutions applying TDR reported notable improvements, including, higher research productivity, greater innovation capacity and Stronger community relationships. Furthermore, TDR supports participatory decision-making and contributes to sustainable development.

DISCUSSION

The results confirm that transdisciplinary research plays a significant role in enhancing knowledge integration within private institutions. By linking scientific knowledge with practical experience, institutions are better equipped to address complex and context-specific challenges.

However, successful implementation requires, Well-defined institutional structures, Strong collaboration among stakeholders and Supportive leadership and policy frameworks. The study emphasizes that knowledge integration is both a technical and social process that depends on trust, cooperation, and shared goals (Nyang'au et al., 2018).

CONCLUSION

Transdisciplinary research offers an effective pathway for improving knowledge integration in private institutions. It enhances collaboration, promotes innovation, and supports practical problem-solving. Nonetheless, its success depends on addressing institutional constraints and strengthening support systems.

RECOMMENDATIONS

The study proposes the following actions:

1. Establish formal frameworks to guide transdisciplinary research
2. Increase investment in collaborative and applied research
3. Strengthen partnerships with industry and local communities
4. Develop policies that support knowledge integration initiatives
5. Build institutional capacity through training in transdisciplinary methods

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