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Technical Report

TRANSABE-EDU: Transcending Architecture and Built Environment Frontiers: A Cross-Cultural Educational Initiative

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Abstract

This paper reports the development of a comprehensive transdisciplinary Master's framework in Sustainable Design and the Built Environment, co-created through a UK-Egypt Transnational Education (TNE) partnership between Northumbria University and Galala University, funded through the British Council's TNE Fund (£27,500). Addressing critical gaps in architectural education, including limited health integration, underrepresented adaptive reuse specialisations, minimal digital innovation, and insufficient cross-cultural frameworks, the TRANSABE-EDU initiative employed a four-phase methodology combining literature review, benchmarking, stakeholder workshops, and validation surveys. Through analysis of 60 international programmes, engagement with 27 Egyptian stakeholders, and validation from 45 academic experts, the research produced four specialised MSc tracks: Design and Planning for Health; Sustainable and Resilient Urbanism; Global Urban Futures and Emerging Cities; and Retrofitting, Heritage Conservation and Adaptive Reuse. The framework integrates core transdisciplinary modules, flexible delivery models (blended learning, block teaching, UK residency options), and robust partnership structures with equitable financial arrangements. Survey validation confirmed strong support for the 1.5-year programme structure (45%), blended delivery modes (60% part-time preference), and emphasis on practical, industry-linked learning (95%). The initiative establishes a replicable model for TNE partnerships addressing global sustainability challenges through locally grounded, internationally benchmarked education.

Keywords: Transnational education, UK-Egypt partnership, Transdisciplinary curriculum, Sustainable urbanism, Architectural education, Curriculum framework

Highlights

- The paper presents a replicable UK–Egypt co-design model for developing transdisciplinary postgraduate programmes in architecture and the built environment.
- It proposes four MSc tracks addressing critical gaps in sustainability, health, heritage, and future urban development.
- Expert validation supports flexible, practice-oriented and blended delivery models aligned with industry and academic needs.

1 Introduction

Global architectural education faces mounting pressure to address interconnected challenges spanning climate adaptation, public health, heritage conservation, and rapid urbanisation (Caniglia et al., 2018). Traditional disciplinary boundaries increasingly constrain graduate capacity to navigate complex, multi-stakeholder environments. Concurrently, Transnational Education (TNE) has emerged as a strategic mechanism for knowledge exchange, institutional capacity building, and workforce development, particularly within UK-Egypt educational partnerships (British Council, 2023). Egypt hosts the fifth-largest cohort of UK TNE students globally, accounting for 42% of Africa's TNE enrollment, with over 23,000 students pursuing UK-validated qualifications in 2020-21 (Cader, 2023).

Despite this growth, master's programmes in Architecture and the Built Environment (ABE) in Egypt encounter significant obstacles. Students experience limited exposure to international best practices, resource constraints hinder cutting-edge instruction, language barriers restrict academic engagement, and curricula can overlook local heritage and community needs (Howell et al., 2022). International collaborations often struggle to adapt to local contexts, risking cultural misalignment and inequitable knowledge transfer. These tensions demand new educational models integrating global perspectives with regional priorities through genuinely collaborative design processes.

The TRANSABE-EDU initiative, funded through the British Council's TNE Fund with a £27,500 award, responds to these imperatives through a one-year collaboration uniting Northumbria University (UK) with Galala University (Egypt) to co-create a transdisciplinary Master's suite in Sustainable Design and the Built Environment. The project addresses identified deficiencies: absence of health-focused spatial design education, underrepresentation of adaptive reuse and retrofitting as standalone specialisations, low visibility of data-driven design approaches, minimal emphasis on cross-cultural frameworks, and lack of integration between design, planning, and governance (Clarke et al., 2016).

1.1 Research Objectives and Strategic Context

The initiative pursues five interconnected objectives: develop an inclusive transdisciplinary teaching model aligned with UK and Egyptian qualification frameworks; create specialized MSc suite focusing on Retrofitting and Adaptive Reuse, Heritage Conservation, Global Urbanism, Sustainability and Resilience, and Spatial Analysis and Design for Health; develop platforms promoting UK-Egyptian staff and student collaboration; integrate virtual learning with interactive online modules; and design sustainable partnership model for enduring impact beyond the grant period.

Egypt's TNE landscape reflects intentional policy alignment. The 2018 International Branch Campus law streamlined approvals for overseas providers, positioning international higher education as a strategic national priority (see Figure 1) (Al-Banna & McNamara, 2023). The British Council's TNE strategy emphasises equitable, co-owned partnerships and capacity building, reinforcing Egypt-UK educational ties. TNE delivery encompasses diverse institutional models: public and national universities operating articulation agreements, private universities managing franchise arrangements, technological universities piloting UK collaborations, and seven international branch campuses delivering home-campus curricula under dual quality oversight (Cader, 2023).

Delivery modalities have evolved significantly. Approximately 80% of enrolments utilise collaborative-provision models, including joint and dual degrees, franchised validation, and twinning programmes (Cader, 2023). The COVID-19 pandemic accelerated the adoption of blended and fully online delivery, prompting architecture programmes to migrate design studios, lectures, and critiques to virtual formats.

The curriculum aligns with United Nations Sustainable Development Goals through embedded sustainability, equity, innovation, and partnership principles: SDG 4 (Quality Education) through flexible delivery modes ensuring professional access; SDG 9 (Industry, Innovation & Infrastructure) through dedicated skill labs in GIS, BIM, and digital fabrication; SDG 11 (Sustainable Cities & Communities)

through adaptive reuse strategies and community-driven redevelopment; SDG 13 (Climate Action) through climate resilience and low-carbon design integration; and SDG 17 (Partnerships for the Goals) through collaborative UK-Egypt partnership model (Ilieva et al., n.d.; UNDP, 2024).

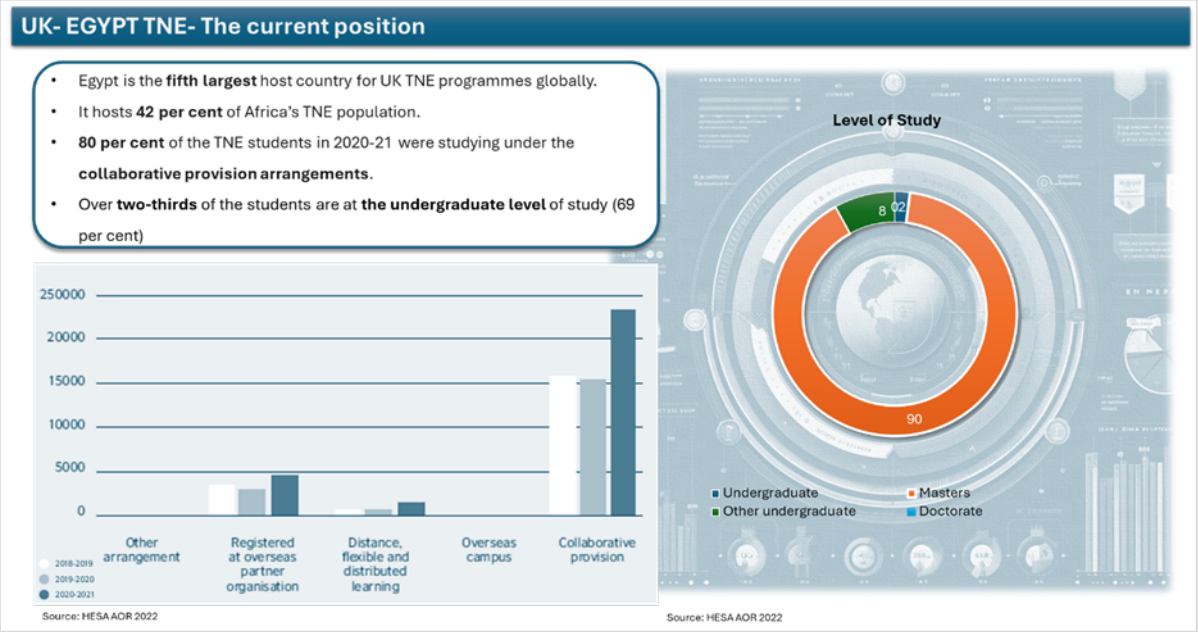

Figure 1. UK-Egypt Transnational Education Current Position showing student distribution, delivery modes, and institutional types.

2 Literature Review: TNE and Cross-Cultural Curriculum Development

The literature review demonstrates that Transnational Education (TNE) requires curriculum models that balance international academic standards with responsiveness to local cultural and professional contexts. It further emphasises that effective cross-cultural curriculum development depends on collaborative partnerships, contextual adaptation, and flexible delivery frameworks.

2.1 TNE Classification and Models

Transnational Education (TNE) refers to education delivered in a country other than where the awarding institution is based. The British Council distinguishes TNE through International Programme and Provider Mobility (IPPM), emphasising institutional strategy for expanding global reach rather than individual student mobility (Knight & McNamara, 2017; Knight, 2019). The Common TNE Classification Framework is anchored in two principles: the nature of the relationship between the sending and host Higher Education Institutions (HEIs), which determines whether categorisation is independent or collaborative, and delivery modes, which consider teaching, assessment, and quality assurance management (Knight & McNamara, 2017).

UK TNE operates within evolving frameworks that reflect varying levels of institutional integration. Common award models include validation, franchise, joint awards, and dual degrees (British Council, 2023). Delivery formats span in-country/flying faculty approaches, distance learning, blended learning, and international branch campuses. The UK's TNE Strategy 2023-2025 highlights shifts toward emerging models, including MOOCs, virtual mobility, work-integrated learning, personalised pathways, and micro-credentials, aiming to improve global accessibility and enhance institutional agility (British Council, 2023).

2.2 UK-Egypt TNE Dynamics

Analysis of 500 scholarly articles using VOSviewer network visualisation and Infranodus discourse analysis reveals critical themes (van Eck & Waltman, 2010; Paranyushkin, 2019). UK universities view Egyptian presence as integral to internationalisation agendas. Coventry University underscores that its Egypt-based campuses represent "important milestones in realising the Group's global vision" (The Knowledge Hub Universities, 2022). For Egypt, partnerships align with Vision 2030 objectives, positioning the country as a regional education hub (British Council, 2022).

TNE primarily involves curriculum and credential mobility rather than mass student migration. Successful partnerships foster various forms of mobility: academic staff exchange, faculty and student exchange programs, joint teaching, and articulation agreements that enable Egyptian students to transfer to UK campuses (Dias et al., 2021; Serpa et al., 2020). Ensuring parity of academic quality is foundational to UK-Egypt TNE. UK partners typically export Quality Assurance Agency (QAA) frameworks wholesale, while programmes undergo evaluation through Egypt's National Authority for Quality Assurance and Accreditation of Education (NAQAAE) and Supreme Council of Universities (SCU) approval (Coleman, 2003; McBurnie, 2013; Stacey, 2023) (see Figure 2).

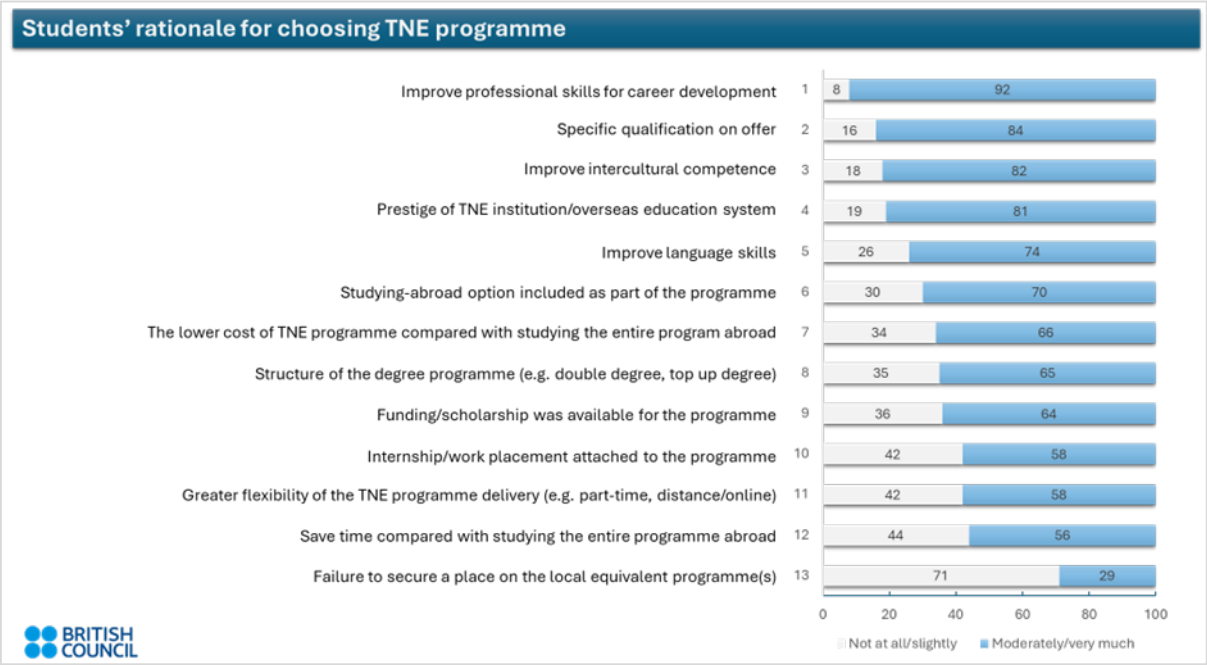

Figure 2. Students' Rationale for Choosing TNE Programme - showing survey data on motivations.

UK-Egypt partnerships catalyse significant innovation within Egyptian ABE education. Dual-degree collaborations introduce novel specialisations previously absent, such as Environmental Architecture and Urbanism at Ain Shams University, producing graduates whose perspectives often reshape local practice (Desai & Westphal, 2022; Knight, 2004). However, power imbalances persist as significant challenges, rooted in traditional models where UK institutions serve as degree-awarding authorities. Recent trends reveal marked shifts toward dual-degree and co-development frameworks symbolising balanced collaboration (Sahasrabudhe et al., 2020).

2.3 Gaps in Current TNE and ABE Education

Comprehensive analysis reveals critical gaps: Limited Health Integration despite increasing evidence linking built environment to health outcomes (Pineo et al., 2020; Capasso et al., 2019); Underrepresented Adaptive Reuse with retrofitting remaining underdeveloped as discrete academic

specialization despite recognized necessity (Douglas, 2006; Conejos et al., 2016); Low Digital Innovation Visibility with urban analytics, BIM, VR/AR, and AI-based simulations underrepresented (Hillier & Hanson, 1984; Batty, 2013); Minimal Cross-Cultural Frameworks with many Egyptian programmes remaining technocratic without sufficient adaptation to local urban dynamics (Salama, 2015; AlSayyad, 2006); and Lack of Design-Planning-Governance Integration preventing students from understanding interdependencies between creative spatial intervention and governance frameworks (Watson, 2014; Healey, 2010).

3 Methodology: A Four-Phase Participatory Design Approach

The TRANSABE-EDU project employs a mixed-methods, participatory curriculum-design methodology that combines qualitative insights from stakeholder workshops with quantitative data from surveys and benchmarking analyses, ensuring the resulting curriculum is evidence-based and collaboratively owned (see Figure 3).

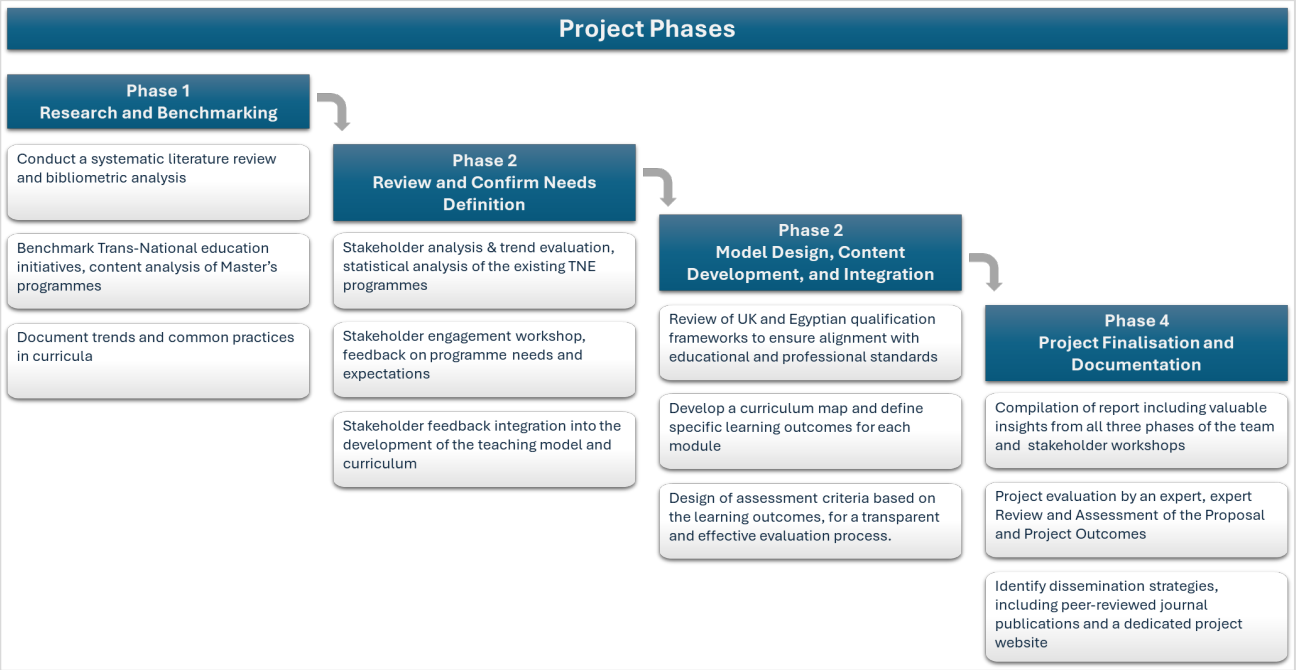

Figure 3. Four-Phase Research Methodology Overview.

Phase 1: Research and Benchmarking – The team conducted a comprehensive review of international transdisciplinary and TNE programmes, extracting best practices. A systematic literature review analysed British Council reports and over 500 academic articles using bibliometric tools (VOSviewer and Infranodus) to visualise connections, identify gaps, and capture thematic clusters (van Eck & Waltman, 2010; Wong, 2018). A detailed inventory of existing master's programmes across UK and Egyptian institutions, through comparative analysis, identified distinctions in teaching methods, assessment strategies, and specialisation areas, resulting in a database of over 150 programmes. Curricula were evaluated across thematic clusters, including heritage conservation, sustainability, adaptive reuse, and global urbanism, examining course content, delivery modes, assessment criteria, and transdisciplinary integration approaches.

Phase 2: Review and Confirm Needs Definition – Through dual-country workshops, structured surveys, and facilitated focus groups, the team gathered rich qualitative data. Statistical analysis of existing TNE programmes focused on enrollment patterns, industry trends, and professional accreditation requirements. On May 20, 2024, Galala University convened the first in-person workshop bringing

together 27 participants from Ain Shams University, Cairo University, British University in Egypt, and Coventry University-Egypt. The workshop facilitated two-way dialogue, enabling the collection of qualitative feedback on needs, expectations, perceived gaps, and opportunities for improvement. Feedback was systematically analysed and incorporated into the Feedback Integration Plan, outlining how stakeholder perspectives shape structure, content, and delivery.

Phase 3: Model Design, Content Development and Validation – Aligning UK and Egyptian qualification frameworks, the team held targeted curriculum-mapping sessions to translate stakeholder needs into sequenced modules. A comprehensive review of the UK Framework for Higher Education Qualifications (FHEQ) and Egyptian qualification standards (SCU guidelines and NAQAAE criteria) ensured compatibility between national education systems. Following the UK workshop, a comprehensive survey was targeted at faculty, staff, and stakeholders from both partner institutions, gathering detailed feedback across programme duration, teaching models, delivery modes, assessment methods, curriculum content, and partnership structures.

Phase 4: Project Finalisation and Documentation – The final phase synthesised all findings into structured recommendations covering programme structure, delivery modes, assessments, and admissions criteria. All findings, activities, and insights were consolidated into the final report. An independent expert evaluation assessed whether the project goals were achieved, the quality and effectiveness of the outputs, and the lessons learned. Dissemination strategy implementation included publishing findings in peer-reviewed academic journals and developing a dedicated project website.

4 Phase 1 Findings: Benchmarking and Gap Analysis

Analysis of master's programmes in architecture and built environment across UK and Egyptian institutions revealed distinct patterns in thematic coverage and educational priorities. Cataloguing identified over 150 programmes distributed across 26 categories in the UK and 14 categories in Egypt. UK high-prevalence categories emerged across Special Programmes (40), Construction Management (39), Urban Planning (37), Architectural Design March/MSc (36), and Real Estate (32). Low-prevalence categories spanning specialised areas included Health & Well-being (2), Architecture and Adaptive Reuse (2), Architecture Computation (4), Building Performance (3), and Infrastructure Planning (2). Egyptian high prevalence focused on Architectural Engineering (22 programmes), with moderate coverage in Special Programmes (5) and Sustainability in Architecture (4).

Detailed content analysis of 32 programmes across six thematic clusters revealed pedagogical structures, assessment approaches, and curricular strengths alongside persistent gaps. Health and Well-being Programmes revealed core themes spanning urbanisation impacts on health, development planning and public health integration, urban life and health interactions. Gaps identified included limited focus on technology and innovation, practical skills development needs in GIS mapping and statistical analysis, policy and advocacy training deficiencies, an emphasis on inter-professional collaboration, and strengthening community engagement. Sustainability Programmes emphasised sustainable materials, energy-efficient design, and renewable energy integration. Gaps included an emphasis on local versus global sustainability practices, requiring stronger comparative approaches; integration of social sustainability aspects; real-world application and industry engagement needs; and a lack of emphasis on retrofitting and existing buildings (see figure 4).

Environmental Planning Programmes addressed environmental sustainability and policy advancement, environmental impact assessment and management. Gaps revealed limited integration of real-world case studies, digital and technological skills need, policy and regulatory depth requirements, climate change adaptation and resilience strategies, and lifecycle and circular economy concepts. Urbanism Programmes spanned sustainable urban development, urban design and planning principles, and innovative approaches. Gaps encompassed interdisciplinary integration needs through co-taught modules, practical application requirements through semester-long practica, advanced technology

application instruction, cultural competency development, and community engagement facilitation training.

Adaptive Reuse Programmes focused on sustainable reuse, investigating environmental, societal, inhabitation, and economic aspects. Gaps identified in global perspective and diversity needs across varied geographic contexts, digital innovation integration, exploration of sociocultural and psychological impacts, and sustainability metrics and evaluation frameworks. Conservation Programmes addressed conservation principles and practice, sustainable management within historic conservation, technical skills and material knowledge. Gaps revealed an emphasis on Western architectural heritage, the need for non-Western perspectives, integration of digital technologies, depth of practical experience, climate change and sustainability, and policy and advocacy training.

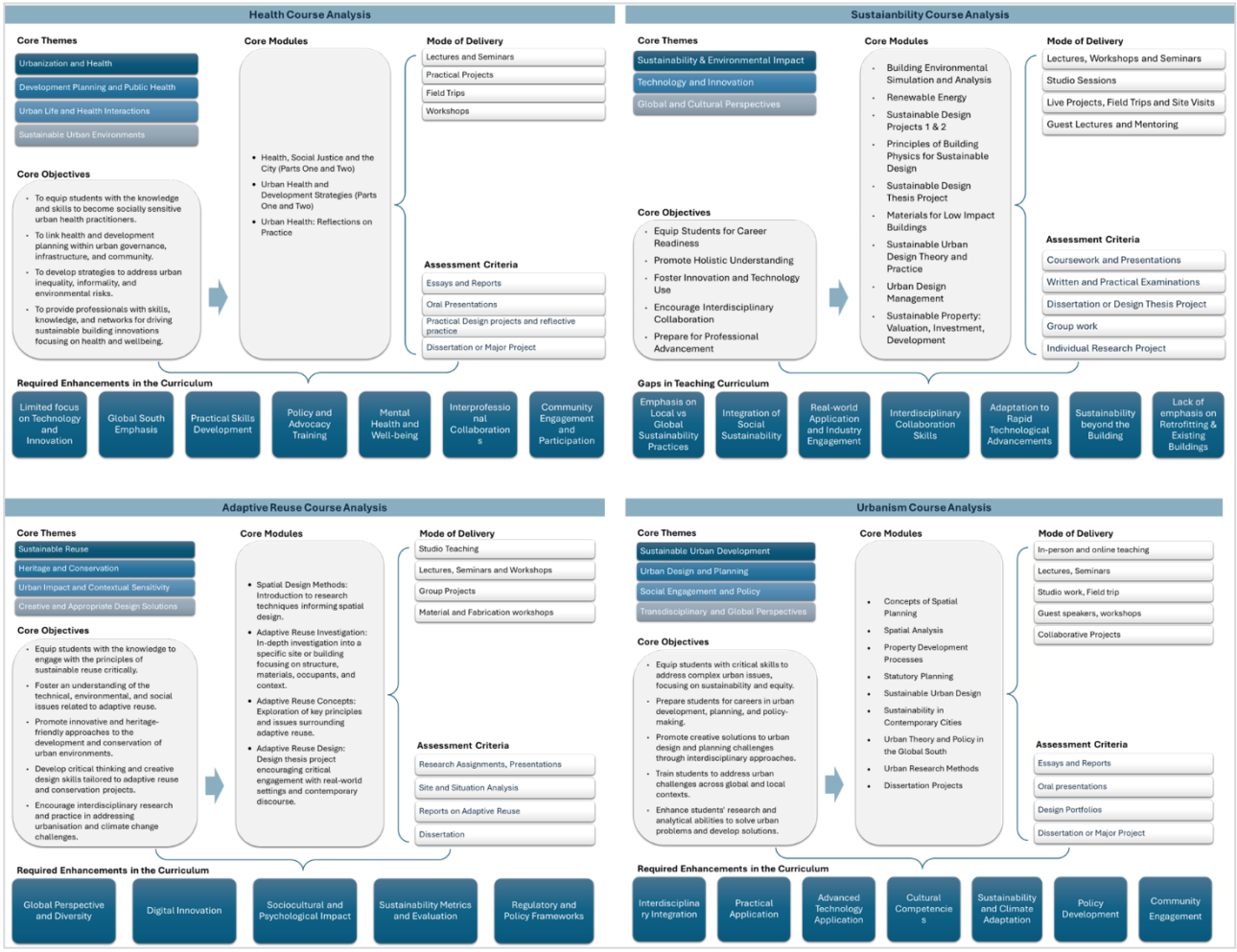

Figure 4. A series of curriculum analysis charts showing gap analyses across health, sustainability, environmental planning, urbanism, adaptive reuse, and conservation courses.

Identification of critical gaps directly informed the development of four proposed master's programmes: the MSc in Design and Planning for Health, which responds to the limited integration of health and well-being into built environment curricula. MSc in Sustainable and Resilient Urbanism addresses the lack of cross-disciplinary training in climate resilience, ecological design, and green infrastructure. MSc in Global Urban Futures and Emerging Cities fills gaps around regionally grounded, culturally embedded frameworks. MSc in Retrofitting, Heritage Conservation and Adaptive Reuse responds to the underrepresentation of retrofitting and adaptive reuse as standalone specialisations.

5 Phase 2 Findings: Stakeholder Engagement and Needs Validation

Stakeholder analysis and trend evaluation established an evidence base for contextually relevant, internationally aligned programme design. Detailed inventory revealed bachelor 's-level degrees dominate the market (57%), followed by master 's-level offerings (26%), highlighting the strategic need to strengthen postgraduate offerings (Cader, 2023). Delivery modes revealed strong reliance on International Branch Campuses (54), with bi-national universities (18) and local partner institutions (12) playing significant roles. The majority of TNE students are self-funded (71%), with a smaller group (39%) supported through scholarships. Employment status showed that 55% were engaged in full-time work during studies, 27% were studying only, and 6% were unemployed (see Figure 5).

Graduate tracking indicated 44% secured employment within three months of graduation, 27% within six months, and 16% continued in existing roles, affirming TNE's role as a mechanism for skills upgrading and career progression. The most cited motivations included the international reputation of the awarding institution (92%), the availability of specific subject programmes (84%), and opportunities for global exposure. Institutional benefits included income generation, diversification of academic offerings, and enhanced collaboration opportunities. Challenges noted include Western-centric content lacking local cultural relevance, limited on-the-ground engagement, and higher costs relative to local programmes.

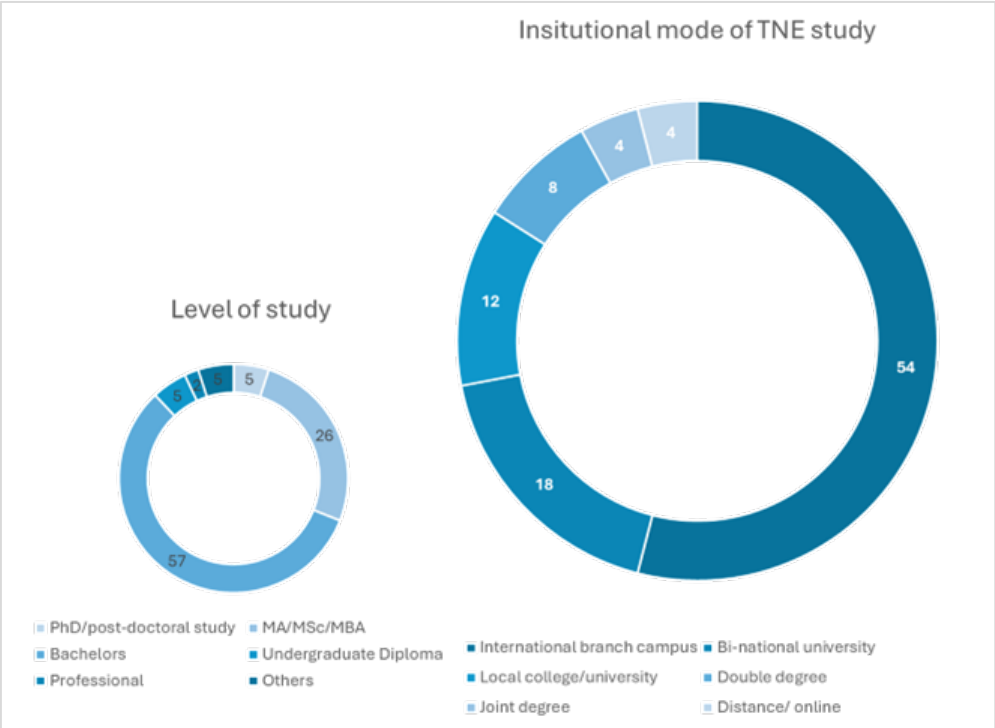

Figure 5. Existing TNE Programs Distribution - showing levels of study and delivery modes.

A workshop held at Galala University on May 20, 2024, convened 27 participants from academic leadership, faculty, administrators, and sector experts (see Figure 6). Professor Yasser Mahgoub welcomed participants, articulated objectives, and provided an overview of Galala City's urban transformation. Professor Mohamed El-Shinawi presented the institution's strategic ambitions within the TNE partnership, underscoring a commitment to cutting-edge, technology-enabled pedagogy, including virtual studios, interactive simulation tools, and bespoke online modules piloted in

collaboration with Arizona State University. The research team shared highlights from Phases 1 and 2, summarising global benchmarking of over 60 postgraduate ABE programmes and reporting on needs-analysis surveys completed through 250 faculty members, industry professionals, and accreditation bodies.

Key discussion points encompassed need for TNE programmes emerging as growing demand in Egypt and Gulf/Arab countries; regulatory frameworks discussion emphasising strategies to navigate requirements and ensure quality; financial implications examination assessing tuition fees, funding models, and potential support mechanisms; benefits to students and institutions highlighting enhanced employability and skill development; sustainable partnership models discussion emphasizing designing frameworks for long-term collaboration; programme structure preferences discussing introduction of 12-month professional master's programme; interdisciplinarity discussion acknowledging academic acceptance but noting industry needs convincing; and recognition and accreditation highlighting challenge of gaining Supreme Council recognition.

Figure 6. TRANSABE-EDU Workshop Discussion in Egypt - showing participants engaged in curriculum refinement discussions

The stakeholder engagement workshop served as a pivotal platform for gathering in-depth feedback and shaping the development of the proposed MSc programmes. Alignment of the proposed curriculum with local academic and professional expectations led to revisions that incorporated shared transdisciplinary modules embedding public health, environmental science, digital innovation, and policy across all programmes. The transdisciplinary strategy now includes cross-disciplinary mentorship with practitioners from the health, planning, conservation, and urban tech sectors. Each MSc is framed as a professional master's degree with a clear thesis component designed to meet Egyptian standards while preserving UK academic rigour. The delivery model integrates blended and modular formats, reducing cost and duration. The framework now mandates dual academic leadership teams, with dedicated UK and Egyptian programme leads. The curriculum embeds experiential learning pathways, such as field studios, policy labs, and capstone projects with external stakeholders. Joint

supervision and articulation agreements being developed allow students to pursue thesis work or electives in either country.

6 Phase 3 Findings: Framework Development and Curriculum Design

Development of a transdisciplinary master's curriculum required careful alignment with the UK and Egyptian qualification frameworks through a comprehensive comparative review. The UK's Framework for Higher Education Qualifications (FHEQ) served as a reference standard for Level 7 programmes, considering the requirement for advanced knowledge and professional competencies, research and analytical skill development, and a 180-credit structure. The Egyptian qualification standards examination focused on the Supreme Council of Universities (SCU) guidelines and NAQAAE criteria, covering a comprehensive curriculum structure, a compulsory thesis component, minimum duration thresholds, and strict adherence to credit-hour systems.

Strategic pillars for transdisciplinary integration emerged from comprehensive benchmarking, stakeholder surveys, UK-Egypt workshops, and bibliometric review: Infuse Core Transdisciplinary Modules with shared suite of anchor modules (6-8 credits each) delivered early building common language; Centre Studio Pedagogy on Real-World Complexity through live project briefs partnering with municipal agencies, NGOs, or private developers; Structure Jointly Supervised Transdisciplinary Thesis with dual-mentor team pairing each student with two supervisors from different fields; Embed Collaborative & Participatory Learning Models through team-based capstone projects and field immersions; Leverage External Experts & Mentorship through guest lecture series and portfolio clinics; and Align Assessment with Integrated Thinking through integrated design-policy briefs and multi-criteria rubrics.

Each programme reflects a transdisciplinary integration strategy with adaptations specific to thematic orientation. MSc in Design and Planning for Health emphasises public health science, social equity, and digital health within urban planning, with a curriculum comprising shared modules, specialised modules (Health and Urban Planning, Environmental Health and Sustainable Development, Health Impact Assessment), and a Transdisciplinary Research Thesis. MSc in Sustainable and Resilient Urbanism applies ecological systems thinking, environmental performance metrics, and resilience theory, with specialised modules addressing Urban Resilience and Adaptation, Sustainable Urban Systems, and Community Engagement. MSc in Global Urban Futures and Emerging Cities grounds design practice in urban theory, development studies, and global political economy, with specialised modules encompassing Emerging Cities and Global Trends, Urban Policy and Governance, and Innovative Urban Design. MSc in Retrofitting, Heritage Conservation and Adaptive Reuse combines conservation science, material studies, and socio-cultural research, with specialised modules addressing Heritage Conservation Principles, Adaptive Reuse and Sustainable Retrofitting, and Conservation Project Management.

Workshop discussions refined the proposed transdisciplinary master's framework through attendee feedback on curriculum structure, delivery modes, assessment practices, and institutional roles. Systematic analysis and integration were achieved through the consolidation of preferences, module calibration, assessment framework adaptation, and institutional role alignment, ensuring smoother coordination, equitable workload distribution, and quality assurance across delivery sites (see Figure 7).

7 Phase 4 Findings: Survey Validation and Final Framework

Structured validation survey targeted academic faculty, curriculum designers, and institutional leaders across Egyptian partner universities. Forty-five respondents were distributed across academic

positions from Teaching Assistants to Professors and Administrative/Leadership roles. Questions are grouped into five strategic categories: Programme Structure & Delivery, Teaching & Learning Modes, Assessment Design, Core Content & Specialisations, and Admissions & Entry Criteria (see Figure 8).

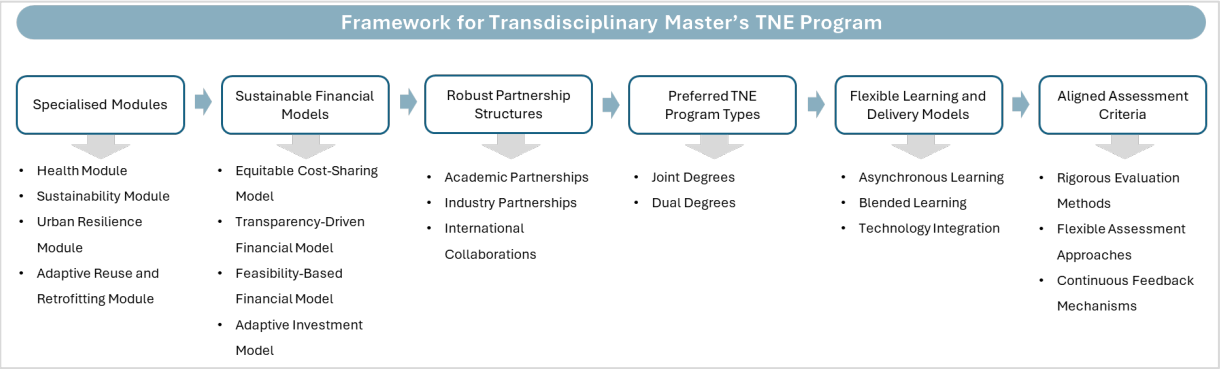

Figure 7. Framework for Developing Transdisciplinary Master's TNE Program showing key components.

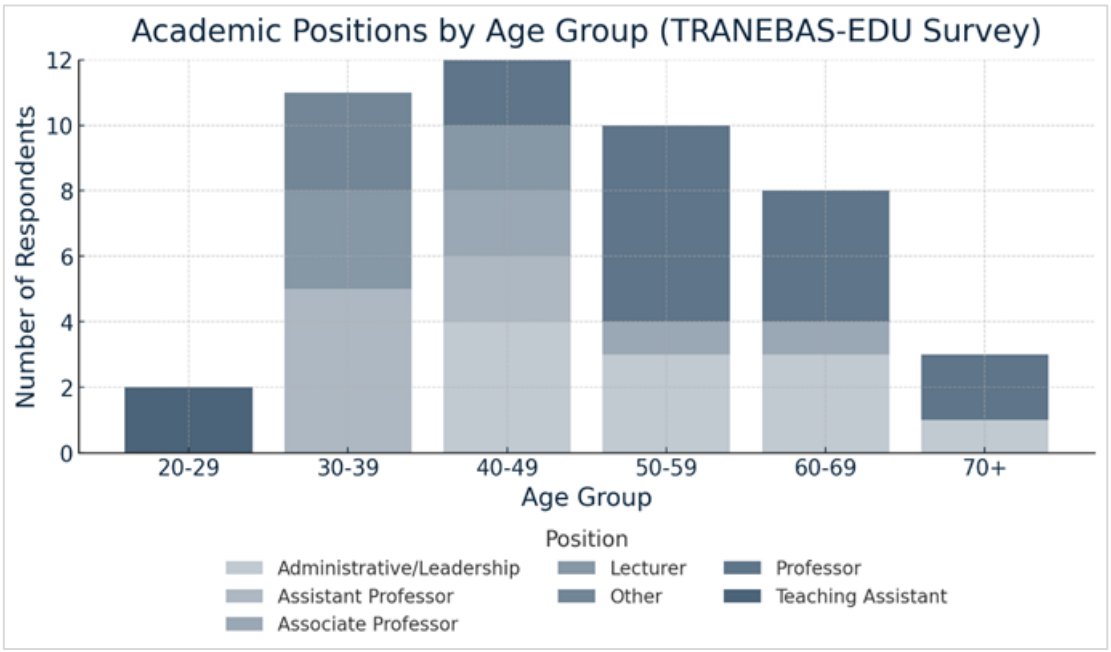

Figure 8. Stacked Bar Chart of Academic Positions by Age Group

Survey feedback (see Table 1) revealed a strong consensus that a 1.5-2 year programme offers the best balance between intellectual depth and practical feasibility. One-year duration garnered 45% support, 1.5 years received 30%, and 2 years received 25%. Block teaching (six weeks, six hours per day) garnered 75% "Very Effective" ratings and 20% "Effective" ratings. The "2+1" delivery model (two years in Egypt, one year in the UK) dominated preferences at 80%. Fee-sharing arrangements showed that 45% supported a 50:50 split between Northumbria and Galala, 30% favoured a 60:40 split, and 25% preferred a 20:80 split. Strong support emerged for 6-month UK residency (68%), with 20% supporting a full year and 12% preferring a 6-week block.

Respondents overwhelmingly endorsed a blended pedagogical approach: 100% valued lectures and seminars, 90% insisted on studio sessions, 80% prioritized field trips and site visits, 75% supported collaborative projects, and 70% valued client-led modules. Work-integrated learning topped the list of emerging delivery models at 74%. Virtual mobility (61%) and personalised learning pathways (57%) further extend global footprint. Traditional assessments shifted away from timed exams (22% support)

toward practical projects and reports (85%), presentations and oral defences (75%), and thesis/dissertation (78%). Emerging methods received strong support: simulations and role-play (67%), e-portfolios (63%), and gamification (61%).

Survey results highlighted five essential themes for Sustainable and Resilient Urbanism: Sustainability & Environmental Impact (95%), Climate Resilience (90%), Circular Economy Concepts (85%), Technology & Innovation (83%), and Policy & Regulation (78%). Key themes for Health and Built Environment included Urban Health & Wellbeing Interactions (85%), Public-Health Planning (80%), Social Justice & the City (75%). Stakeholders prioritised Transdisciplinary/Global Perspectives (90%), Smart Cities & Technology (85%), and Urban Resilience (80%) for Global Urban Futures. Nearly universal endorsement (90-97%) emerged for Heritage & Conservation, Adaptive-Reuse Design (85%), Contextual Sensitivity (80%), and Technical Expertise in Retrofitting (90%) for the Retrofitting and Heritage Conservation track.

Eighty-three per cent of respondents required a bachelor's degree in architecture, planning, or sustainable design, with 70% majority setting a minimum GPA at 3.0/4.0 (80% support). Regarding professional experience, 70% indicated no requirement, while 30% favoured 1-2 years. Nearly all stakeholders demanded research skills (98%) and communication abilities (96%) at entry. A strong majority insisted on CAD/GIS/BIM proficiency (85%) and design aptitude (70%). English language proficiency requirement received 100% support (TOEFL 80+ / IELTS 6.5+). The interview component received 100% support as an essential tool for assessing motivation and fit.

Table1. Overview of Survey Results - Comprehensive Summary Table

Question	Most Selected Option	Second Most Selected Option	Third Most Selected Option
1. Duration of professional master's program	1 year (45 %)	1.5 years (30 %)	2 years (25 %)
2. Study mode most effective	Part-time (weekends + online) (60 %)	Full-time (30 %)	Hybrid/block (10 %)
3. UK residency duration	6 months (one semester) (68 %)	1 year (20 %)	6 weeks block (12 %)
4. Effectiveness of 6-week blocked teaching	Very effective (75 %)	Effective (20 %)	Neutral / not effective (5 %)
5. Opinion on spending 6 months in the UK	Very effective (70 %)	Effective (20 %)	Neutral/not effective (10 %)
6. Effectiveness of full year in UK	Very effective (55 %)	Effective (35 %)	Neutral/less effective (10 %)
7. Preferred delivery model (UK/Egypt roles)	2-year Egypt + 1 year UK (thesis + cert.) (80 %)	1 year UK model (UK-only) (10 %)	1 year Egypt model (10 %)
8. Fee-share NU: Galala	50: 50 (45 %)	60: 40 (30 %)	20: 80 (25 %)
9. Teaching modes to include	Lectures & seminars (100 %)	Studio sessions (90 %)	Field trips/site visits (80 %)
10. Emerging delivery models	MOOCs (70 %)	Virtual mobility (60 %)	Personalised learning (50 %)
11. Traditional assessment methods	Practical projects & reports (85 %)	Essays & coursework (80 %)	Presentations/oral exams (75 %)
12. Emerging assessment methods	Gamification (60 %)	e-portfolio (55 %)	Simulations/role-play (50 %)
13. Essential sustainable-urbanism curriculum components	Sustainability & environmental impact (95 %)	Climate-resilience (90 %)	Circular-economy concepts (85 %)
14. Importance of transdisciplinary approaches	Extremely important (90 %)	Very important (10 %)	
15. Emphasis on practical/real-world applications	Yes – industry/community projects (100 %)		
16. Importance of career prep/networking	Very important (80 %)	Important (15 %)	Neutral (5 %)
17. Core themes for "Design & Planning for Health"	Urban health & wellbeing interactions (85 %)	Public-health planning (80 %)	Social justice & the city (75 %)
18. Competencies for future urban-health practitioners	Analytical/technical health-planning skills (90 %)	Social-justice & cultural-sensitivity (85 %)	Interprofessional teamwork (80 %)

19. Importance of client-led modules/field trips/live projects	Very important (95 %)		
20. Local vs global in urban-health curriculum	More focus on local practices (60 %)	Balance of both (40 %)	
21. Core themes for "Global Urban Futures & Emerging Cities"	Transdisciplinary/global perspectives (90 %)	Smart cities & tech (85 %)	Urban resilience (80 %)
22. Competencies for emerging-city challenges	Smart-tech capacity (85 %)	Data analysis & research (80 %)	Governance & policy skills (75 %)
23. Importance of practical skills for planning/sustainable cities	Very important (95 %)		
24. Emphasis on social-policy engagement in emerging cities	Yes (65 %)	Somewhat (25 %)	No (10 %)
25. Balance global trends with local challenges	Yes (70 %)	Balance both (30 %)	
26. Core themes for retrofitting/heritage & reuse	Heritage & conservation (90 %)	Adaptive-reuse design (85 %)	Contextual sensitivity (80 %)
27. Competencies for adaptive-reuse practitioners	Technical expertise in retrofitting (90 %)	Conservation policy/regulations (85 %)	Creative problem-solving (80 %)
28. Local vs global in adaptive reuse	Yes – both (100 %)		
29. Minimum academic qualification	Bachelor's in a related field (95 %)		
30. Minimum GPA requirement	≥ 3.0/4.0 (80 %)	≥ 2.7/4.0 (15 %)	No minimum (5 %)
31. Required academic background	Architecture (90 %)	Urban planning (60 %)	Sustainable design (50 %)
32. Prior work experience required?	No (70 %)	Yes 1–2 yrs (30 %)	
33. Pre-application skill proficiency required	CAD/BIM/GIS (85 %)	Communication (60 %)	Research (50 %)
34. Language proficiency required?	English (TOEFL 80+ / IELTS 6.5+) (100 %)		
35. Portfolio/work-samples required?	No (60 %)	Yes (40 %)	
36. Admission process components	Interview (in-person/online) (100 %)	Entrance exam/written test (20 %)	

8 Discussion: Implications for TNE Partnership Design

The TRANSABE-EDU framework advances theoretical understanding of transnational education in several dimensions. First, it operationalises transdisciplinarity through structured curriculum architecture rather than treating it as an aspirational goal, providing replicable mechanisms for achieving genuine integration across disciplinary boundaries (Caniglia et al., 2018; Tian & Martin, 2014). Second, the framework demonstrates how collaborative curriculum design can address persistent power asymmetries in TNE partnerships through dual-degree structures, joint curriculum committees, shared governance charters, and clearly defined intellectual property agreements (Clarke et al., 2016). Third, the research validates the importance of contextualised needs assessment in curriculum development and affirms participatory design methodologies as essential to TNE programme development.

The framework's dual-oversight model through UK QAA and Egyptian NAQAAE/SCU provides robust quality mechanisms while creating administrative complexity. Institutions must invest in dedicated liaison teams, legal expertise, and joint moderation panels to navigate parallel review processes. However, this investment yields significant returns: dual accreditation enhances programme credibility, facilitates graduate mobility, and satisfies professional licensure requirements in both countries. Survey validation of a 50:50 tuition split with adjustments for high-cost modules (60:40) demonstrates stakeholder commitment to transparent, equitable financial arrangements. Sustainable implementation requires additional revenue diversification: industry-sponsored research projects, government capacity-building grants, and alumni endowments.

Blended delivery models demand robust digital platforms: learning management systems for hosting asynchronous content, cloud-based design studios for enabling real-time collaboration, video conferencing infrastructure for synchronous seminars, and e-portfolio systems for tracking longitudinal student development. Faculty development is equally critical, requiring training in online facilitation

techniques, digital studio pedagogy, and formative assessment approaches adapted for virtual environments. Formal memoranda of understanding must clearly delineate decision-making authority across academic, administrative, and financial domains. Joint programme boards should meet quarterly to review enrolment, assess learning outcomes, address student feedback, and plan strategic developments.

The four proposed MSc tracks directly address gaps identified through benchmarking and content analysis. MSc in Design and Planning for Health fills a void in architectural education, largely silent on the public health implications of spatial design. MSc in Retrofitting, Heritage Conservation and Adaptive Reuse responds to the urgent need for professionals capable of extending building lifecycles through technically sophisticated, culturally sensitive interventions. Across all tracks, embedded training in GIS, BIM, data analytics, and emerging technologies ensures that graduates possess digital literacy, an increasingly essential skill for contemporary practice. The glocal pedagogy pervading all programmes—comparative case studies, dual-country field immersions, joint UK-Egyptian supervision—cultivates cultural fluency alongside technical competence.

Several limitations warrant acknowledgement. The validation survey sample comprised 45 respondents, primarily from Egyptian academic institutions. Broader stakeholder engagement, including industry practitioners, regulatory bodies, and prospective students, would strengthen the evidence base. The framework remains untested in practice; empirical validation through pilot cohorts is essential. Financial modelling relied on institutional estimates and stakeholder preferences rather than detailed market analysis. Future research should investigate optimal ratios of face-to-face versus online instruction in blended delivery, the effectiveness of different co-teaching models, the impact of UK residency duration on learning outcomes, the role of industry partnerships in enhancing employability, and mechanisms to ensure that research produced through TNE partnerships benefits both contexts equitably.

9 Conclusion

The TRANSABE-EDU initiative, funded by the British Council's TNE Fund, demonstrates how systematic, participatory curriculum design can create transdisciplinary educational frameworks to address complex global challenges through collaborative international partnerships. The four-phase methodology produced a comprehensive curriculum architecture for four specialised MSc tracks: Design and Planning for Health, Sustainable and Resilient Urbanism, Global Urban Futures and Emerging Cities, and Retrofitting, Heritage Conservation and Adaptive Reuse.

Key achievements include identification of critical gaps through analysis of 150 international offerings; engagement of 27 Egyptian stakeholders in intensive workshop dialogue; development of transdisciplinary integration strategy through six strategic pillars; and validation of framework components through survey of 45 academic experts confirming strong support for 1.5-year programme structure (45%), blended delivery modes (60% part-time preference), and emphasis on practical, industry-linked learning (95%).

The framework establishes replicable model for TNE partnerships characterized through equitable governance structures with joint steering committees; transparent financial arrangements balancing institutional contributions with student affordability; dual quality assurance satisfying both UK QAA and Egyptian NAQAAE requirements; flexible delivery modes combining weekend academies, block teaching, online modules, and optional UK residency; culturally responsive curriculum integrating glocal case studies; and robust assessment strategies emphasizing project-based learning, simulations, e-portfolios, and multi-stakeholder feedback.

The initiative aligns with the UN Sustainable Development Goals by promoting quality education (SDG 4), fostering industrial innovation and infrastructure (SDG 9), preparing graduates to create sustainable cities and communities (SDG 11), embedding climate action (SDG 13), and exemplifying partnerships

for the goals (SDG 17). As the project transitions from framework development to implementation, priorities emerge securing final regulatory approvals; establishing technology infrastructure; recruiting inaugural cohorts; launching faculty development programmes; formalising industry partnerships; and establishing monitoring and evaluation systems for continuous improvement.

The TRANSABE-EDU framework offers a blueprint for transnational, transdisciplinary education that transcends disciplinary silos and institutional boundaries, preparing graduates to navigate interconnected challenges spanning climate adaptation, public health, heritage conservation, and rapid urbanisation. Such collaborative educational innovations become essential for cultivating leadership capable of forging sustainable, resilient, and equitable urban futures.

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Data Availability Statement

Detail where the data supporting your research results can be accessed, including links to publicly archived datasets. If data is unavailable, provide a clear statement explaining the reasons, such as privacy or ethical restrictions.

Conflicts of Interest

Declare any potential conflicts of interest or state, “The authors declare no conflict of interest.” Include details about the role of funders in research, data collection, analysis, writing, or publication decisions if applicable.

References

Al-Banna, S., & McNamara, J. (2023). *Transnational education in Egypt*. British Council.

AlSayyad, N. (2006). Cinematic urbanism: A history of the modern from reel to real. Routledge.

Batty, M. (2013). *The new science of cities*. MIT Press.

British Council. (2022). *The value of transnational education partnerships*. https://www.britishcouncil.org

British Council. (2023). *Transnational education (TNE) strategy 2023–2025*. https://www.britishcouncil.org/education/he-science/knowledge-centre/transnational-education

Cader, I. (2023). *Transnational education in Egypt*. British Council.

Caniglia, G., John, B., Bellina, L., Lang, D. J., Wiek, A., Cohmer, S., & Laubichler, M. D. (2018). The glocal curriculum: A model for transnational collaboration in higher education for sustainable development. *Journal of Cleaner Production*, *171*, 368–376. https://doi.org/10.1016/j.jclepro.2017.09.207

Capasso, L., Galea, S., & Friel, S. (2019). Rapid urbanization and population health: Framework and mechanisms. In *Integrating the social and built environments to promote health and wellbeing in urban areas* (pp. 15–34). Springer.

Clarke, A., Johal, T., Sharp, K., & Quinn, S. (2016). Achieving equivalence: A transnational curriculum design framework. *International Journal for Academic Development*, *21*(4), 364–376. https://doi.org/10.1080/1360144X.2015.1092444

Coleman, D. (2003). Quality assurance in transnational education. *Journal of Studies in International Education*, *7*(4), 354–378. https://doi.org/10.1177/1028315303255597

Conejos, S., Langston, C., & Smith, J. (2016). Enhancing sustainability through designing for adaptive reuse from the outset: A comparison of adaptSTAR and adaptive reuse potential (ARP) models. *Facilities*, *34*(5/6), 364–384.

Desai, A., & Westphal, J. (2022). *The scale of UK higher education transnational education 2020–21*. Higher Education Statistics Agency.

Dias, G. P., Belem, B., Amaral, C., Margarida, M. P., Dora, S., & Filipe, S. (2021). Between promises and pitfalls: The impact of mobility on the internationalization of higher education. *Journal of Further and Higher Education*, *45*(1), 79–94. https://doi.org/10.1080/0309877X.2020.1735321

Douglas, J. (2006). *Building adaptation* (2nd ed.). Butterworth-Heinemann.

Healey, P. (2010). Making better places: The planning project in the twenty-first century. Palgrave Macmillan.

Hillier, B., & Hanson, J. (1984). *The social logic of space*. Cambridge University Press.

Howell, B., Ilieva, J., & Finlayson, R. (2022). Environment for transnational education partnerships and UK qualifications: Challenges and opportunities—Egypt and the UK. British Council.

Ilieva, J., Healey, N., Tsiligiris, V., Ziguras, C., Killingley, P., & Lawton, W. (n.d.). *The value of transnational education partnerships: Part of going global partnerships*. British Council.

Knight, J. (2004). Internationalization remodeled: Definition, approaches, and rationales. *Journal of Studies in International Education*, *8*, 5–31. https://doi.org/10.1177/1028315303260832

Knight, J. (2019). International programme and provider mobility (IPPM) in selected African countries: A mapping study of IPPM national policies, regulations and activities. British Council.

Knight, J., & McNamara, J. (2017). Transnational education: A classification framework and data collection guidelines for international programme and provider mobility (IPPM). British Council.

McBurnie, G. (2013). Quality assurance for transnational education: International, national and institutional approaches. In M. Wallace & L. Dunn (Eds.), *Teaching in transnational higher education* (1st ed., pp. 193–203). Routledge.

Paranyushkin, D. (2019). InfraNodus: Generating insight using text network analysis. *The World Wide Web Conference*, 3584–3589. https://doi.org/10.1145/3308558.3314123

Pineo, H., Glonti, K., Rutter, H., Zimmermann, N., Wilkinson, P., & Davies, M. (2020). Urban health indicator tools of the physical environment: A systematic review. *Journal of Urban Health*, *97*, 200–223.

Sahasrabudhe, S., Naim, S., & Kasat, K. (2020). Internationalisation of higher education – Necessity to adapt to new forms of engagement for ensuring sustainability? *Journal of Statistics and Management Systems*, *23*(2), 431–444. https://doi.org/10.1080/09720510.2020.1736328

Salama, A. M. (2015). Spatial design education: New directions for pedagogy in architecture and beyond. Routledge.

Serpa, S., Caldeira, S., Serpa, M., Lalanda-Gonçalves, R., Montenegro, H., & Rego, I. (2020). Mobility in the internationalisation of higher education institutions. *International Journal of Higher Education*, *9*, 17822. https://doi.org/10.5430/ijhe.v9n4p46

Stacey, V. (2023, September 27). TNE opportunities in Egypt mapped out in BC report. *The PIE News*.

The Knowledge Hub Universities. (2022). *Coventry University – The Knowledge Hub*. https://tkh.edu.eg/coventry-university-degree-egypt/

Tian, X., & Martin, B. (2014). Curriculum design, development and implementation in a transnational higher education context. *Journal of Applied Research in Higher Education*, *6*(2), 190–204. https://doi.org/10.1108/JARHE-02-2013-0007

UNDP (United Nations Development Programme). (2024). *What are the Sustainable Development Goals?* https://www.undp.org/sustainable-development-goals

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

Watson, V. (2014). Co-production and collaboration in planning – The difference. *Planning Theory & Practice*, *15*(1), 62–76.

Wong, D. (2018). VOSviewer. *Technical Services Quarterly*, *35*(2), 219–220. https://doi.org/10.1080/07317131.2018.1425352

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