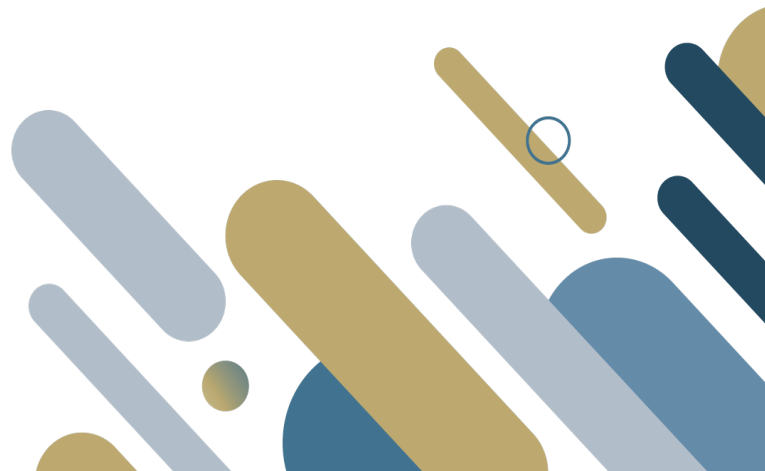


Current Practices & Emerging Futures of Higher Education

*Entrepreneurship and Engagement
in Latin America, the Middle East,
Asia-Pacific and Africa*

Lina Landinez & Thorsten Kliewe (Eds.)



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Foreword

Higher education must evolve as a catalyst for societal transformation, fostering entrepreneurship and engagement to empower innovation, sustainability, and global collaboration, shaping a future that is inclusive, resilient, and purpose-driven.

Josep M. Pique

The world is entering a period of profound transformation. Forces such as digitalisation, climate change, globalisation, demographic shifts, and the rapid emergence of artificial intelligence are reshaping the way societies function and how individuals live, work, and connect. In this evolving landscape, higher education stands at a critical juncture. It is no longer sufficient for universities to transmit knowledge within the borders of traditional disciplines; they must now act as dynamic agents of change, equipping students, communities,

and industries with the capacity to navigate uncertainty and co-create a more sustainable and inclusive future.

At the heart of this transition lies entrepreneurship and engagement. Entrepreneurship in higher education should be understood not merely as the creation of new ventures, but as the cultivation of an innovative and resilient mindset—one that embraces creativity, problem-solving, adaptability, and responsibility.



Engagement complements this by forging meaningful connections between universities and their ecosystems, ensuring that knowledge and talent flow seamlessly across boundaries to generate societal, cultural, and economic value. Together, these two dimensions redefine the mission of higher education: to empower individuals and institutions to make a difference in the world.

The entrepreneurial and engaged university is emerging as a model fit for the challenges and opportunities of our time. Such institutions are deeply embedded in their communities, collaborating with governments, industries, and civil society (Quadruple Helix Agents) to design solutions for shared problems. They promote interdisciplinarity, encouraging students and researchers to move beyond silos and confront complexity with holistic perspectives. They are places where learning is lifelong, where innovation is not only technological but also social, cultural, and environmental, and where leadership is guided by purpose as well as performance.

Looking to the future, several trends point to the continued evolution of higher education. Digital transformation is opening new pathways for access, personalisation, and collaboration in teaching and research. The growing emphasis on sustainability calls on universities to align their strategies with global agendas such as the Sustainable Development Goals, placing responsibility and custodianship at the core of their missions. The rise of lifelong and flexible learning requires universities to rethink curricula, pedagogy, and partnerships to support learners at all stages of life. Most importantly, higher education must remain committed to fostering human



Entrepreneurship and engagement redefine the mission of universities: to empower individuals and institutions to make a difference in the world.



potential—nurturing curiosity, creativity, and a sense of agency that will allow graduates not only to adapt to change, but to shape it.

The contributions gathered in this book reflect this new paradigm. They provide diverse perspectives and practical insights into how entrepreneurship and engagement can be embedded in institutional strategies, educational practices, and community partnerships. By showcasing examples from across the globe, the book highlights the richness of approaches while pointing to a shared vision: higher education that is entrepreneurial in spirit, engaged in practice, and transformative in impact. It is this plurality of voices and experiences that makes the work particularly valuable. Readers will not only find inspiration but also concrete pathways to apply in their own contexts.

The Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU) has been a driving force in articulating and supporting this vision, fostering a global movement that encourages universities to rethink their missions and embrace innovation with responsibility. This book represents another important milestone in that journey, offering both reflection and direction for the future of higher education.

The challenges ahead are undeniably complex. Yet, they also present extraordinary opportunities for higher education to redefine its role and reaffirm its relevance. By embracing entrepreneurship and engagement, universities can act as catalysts for positive change, enabling societies to flourish in the face of disruption and uncertainty. The task is urgent, but the potential is immense.

It is in this spirit that I invite readers to engage with the following pages. The insights, strategies, and experiences presented here are not simply ideas to be discussed, but calls to action. They remind us that the future of higher education is not predetermined; it is shaped by the choices we make today. By fostering entrepreneurial mindsets, strengthening engagement with society, and nurturing innovation in all its forms, higher education can become a true force for a better tomorrow.

Dr. Josep M. Piqué

Commissioner for Entrepreneurial and Engaged University
La Salle – Ramon Llull University (URL)

*Accredited as Entrepreneurial University
by ACEEU (2024)
Accredited as Engaged University
by ACEEU (2025)*

President of La Salle Technova Barcelona Innovation Park - URL, XVII President of IASP (International Association of Science Parks and Areas of Innovation) and II President of the THA (Triple Helix Association)

“

The future of higher education is not predetermined; it is shaped by the choices we make today to foster entrepreneurial mind-sets and engaged institutions.



About ACEEU and the Motivation for this Book

ACEEU believes that universities can and should create greater social, economic, and cultural impact. By embedding entrepreneurship and engagement at the heart of their mission, institutions move beyond education and research to become true engines of societal transformation. This book reflects this vision, showcasing how universities across Latin America, the Middle East, Africa, and Asia-Pacific are redefining excellence through innovation, inclusion, and impact.

Lina Landinez & Thorsten Kliewe

The Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU) is the only global quality assurance body dedicated exclusively to recognising and advancing the third mission of higher education. While teaching and research have long defined universities, ACEEU champions a broader and equally vital responsibility: creating meaningful social, econom-

ic, and cultural impact through entrepreneurship and engagement.

We believe entrepreneurship and engagement are the twin forces reshaping the role of universities in the 21st century. Entrepreneurial universities cultivate mindsets and skills across disciplines, open diverse ca-

reer pathways, and translate research into solutions with real societal value. Engaged universities align education and research with community needs, integrate external stakeholders, and foster collaborations that drive regional development. Together, these orientations position universities as *impact hubs*, central actors in transforming industries, communities, and societies.

At the heart of this shift lies ACEEU's mission: to redefine what an excellent university truly is. Excellence means moving beyond academic outputs to deeply engage with the world around, turn ideas into action, and contribute to building more inclusive, resilient futures. Through its pioneering accreditation framework, ACEEU supports institutions in embedding these capacities across their structures. More than a quality label, ACEEU accreditation is a catalyst for institutional growth. It helps universities unlock their full potential by embedding an entrepreneurial and socially responsible spirit to foster collaborative innovation, and meaningful impact.

This book, *Current Practices & Emerging Futures of Higher Education*, is born from this conviction. Too often, however, global discussions on higher education focus narrowly on North America and Europe, overlooking vibrant practices and innovations elsewhere.

Published by ACEEU, this volume broadens the conversation by showcasing inspiring stories from 19 contributors across 13 countries in Latin America, the Middle East, Africa, and Asia-Pacific.

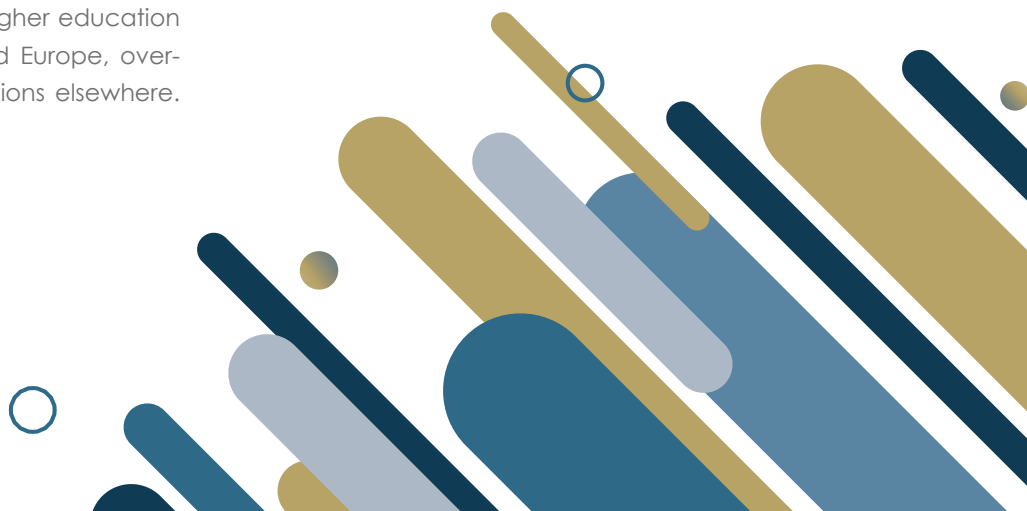
Each chapter illustrates how universities are reimagining their mission through entrepreneurship and engagement, forging transformative partnerships, empowering communities, and shaping more sustainable futures. Together, these stories reveal higher education as a living force that drives change far beyond campus walls. They embody ACEEU's belief that the future belongs to institutions bold enough to redefine what a university can be: a place of learning and a powerful engine of change.

Dr. Lina Landinez

CEO of ACEEU

Prof. Dr. Thorsten Kliewe

Chair of ACEEU



ACEEU Accreditation Factsheet

Recognising Excellence in Entrepreneurship and Engagement

Accreditations

Entrepreneurial University
Engaged University

Accreditation Levels

Institutional Level
Divisional Level (Faculty, School, or Department)

Accreditation Period

5 years



[Learn More](#)

Accreditation Dimensions and Standards

Orientation and Strategy
(Institutional Commitment, Shared Goals, Financial Planning)
People and Organisational Capacity
(Leadership, Staff Profile, Incentives and Rewards)
Drivers and Enablers
(Culture, Internal Support Structures, Service Alignment)
Activities
(Education, Research, Third Mission Activities)
Innovation and Impact
(Continuous Improvement, Influence within the Ecosystem, Impact)

Accreditation Process

Clearly defined 20 step process, covering 4 phases (eligibility, self-evaluation, peer review, final evaluation)

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Eligibility Applications
Received

28

Accreditations
in Progress

22

Accreditations
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Countries in which
ACEEU current accredits



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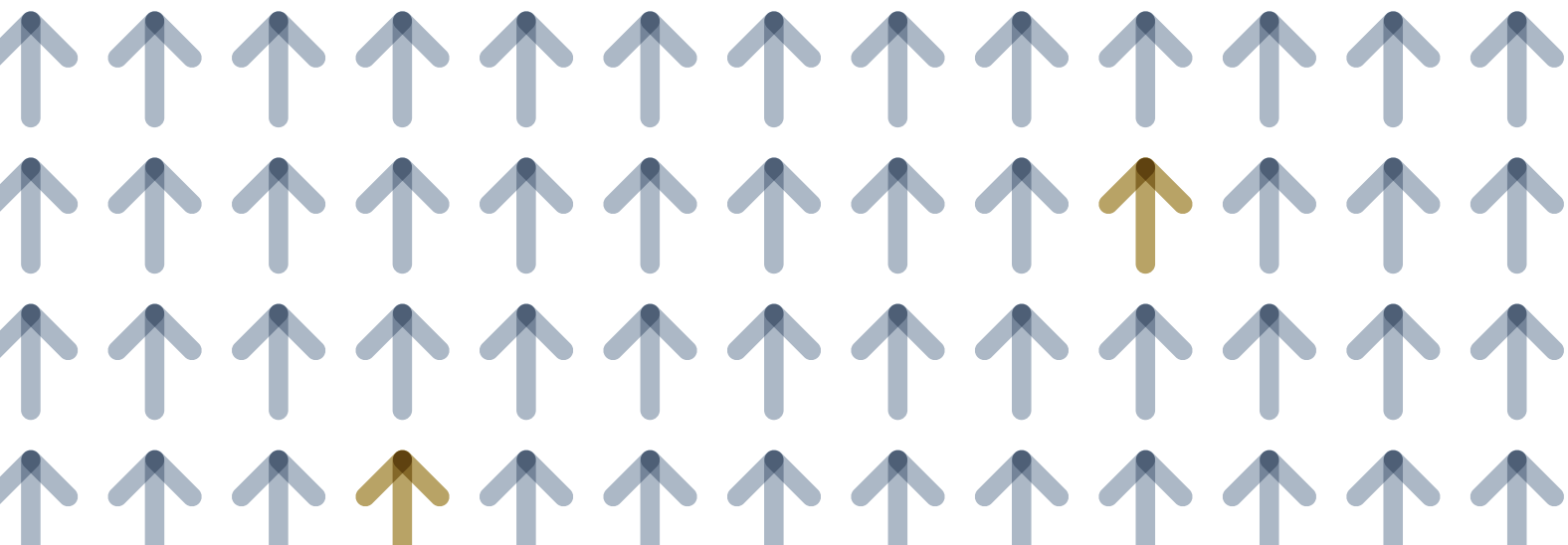
Reimagining Higher Education through Entrepreneurship and Engagement

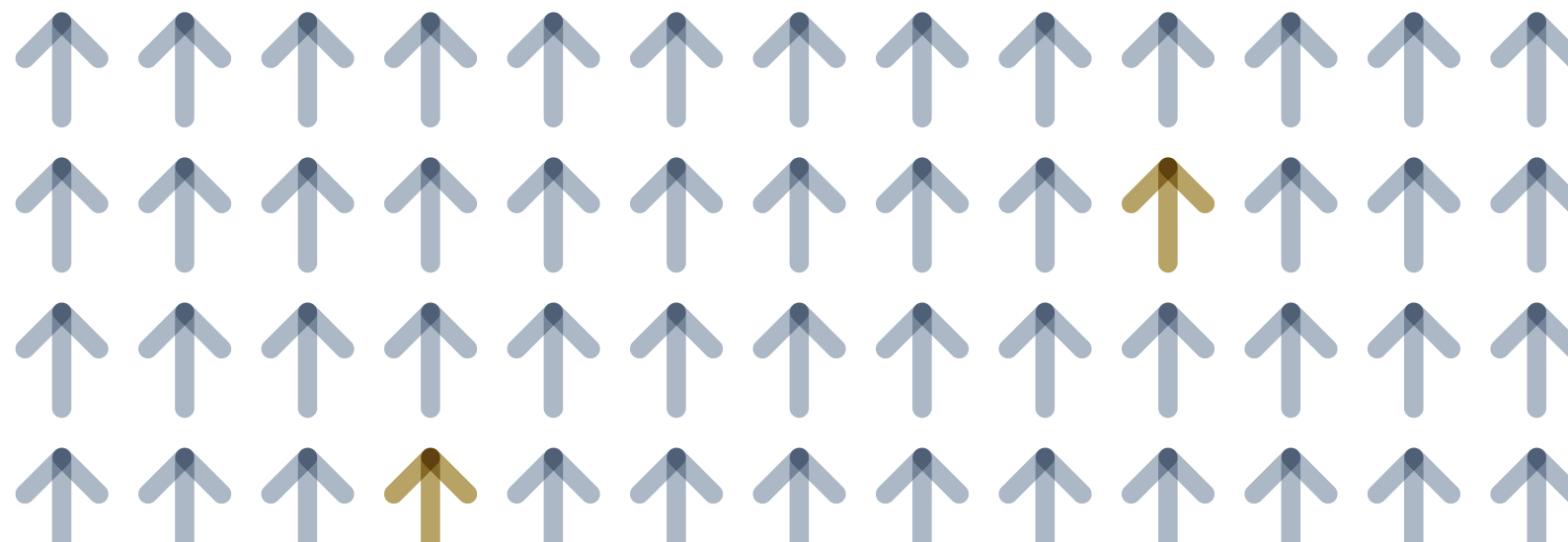
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Thorsten Kliewe*

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Section 1

ROLE OF HEIs





Redefining HEIs as Agents of Social Change

As students are increasingly aware of environmental preservation and becoming champions of social change, university's societal role is being redefined

By Peter Bamkole

Lagos, Nigeria is home to about 25 million people as of 2025. If Lagos were a country, it would be the 3rd largest by population in West Africa and 20th in the entire continent of Africa. Its position along the West African coastline makes it susceptible to flooding due to climate change, rapid urbanization and inadequate drainage infrastructure. Compounding the drainage problem is the indiscriminate disposal of non-degradable materials, especially plastic bottles and packages, which block drainage systems, especially during the rainy season. While the State Government regularly clears the major drains, citizens are encouraged to clear those in their neighbourhoods. A Special Government agency ensures that structures are not built on top of drains and canals and demolishes such structures wherever they are found. A more sustainable solution, however, is to create awareness that will

lead to behavioural change among residents. The campaign to eradicate single-use plastics came to a peak when the Lagos State government banned its use in 2024. Many retail stores introduced a stiff charge on carrier bags to encourage customers to bring their own bags for shopping. Many non-profits embarked on awareness campaigns to give a boost to this important government policy. However, old habits don't die easily.

Universities are referred to as "Ivory Towers", primarily because of their focus on "Teaching and Learning" and "Research". The third leg of their mission, which is "service to the community", is usually downplayed. Yet, this is just as important. While we teach and hold conferences and produce journal articles on climate change, translating this into visible action may be the





missing link. Our students are now showing us that Action First may be the best way to reimagine our ivory towers. While the university can support the government in research leading to policy formulation, service to the community will enable citizens to understand the why. And while the university may not have the authority to intervene in urban development and renewal, influencing citizens' behaviour through community engagement is within its purview.

As an entrepreneurial and engaged university, Pan-Atlantic University students, under the auspices of Living Green Club, took up the challenge, leveraging on the Yemisi Shyllon Museum of Arts on campus and pulling support from four corporates - Dangote Industries, Access Bank, Nigerian Bottling Company and Nigerian Conservation Foundation to create an all-inclusive stakeholder engagement in the Ibeju-Lekki Local government area where the university is situated. This is a

follow-up on previous work done by another student-led club – Community Service Project Club, which assumed the responsibility of cleaning a nearby beach of plastic bottles. The students, guided by their faculty mentor and other staff members, erected an Eco-Alchemy, which blends arts with environmental stewardship. Three things were achieved:

1. Internal Cohesion

In the process of building the Eco-Alchemy, the university community kept on asking “What is this?” “Why do they need plastic bottles?” This generated a buzz across campus. The students had to juggle course assignments with building the Eco-Alchemy and following up with the corporate funders of the project. As I witnessed their frustrations and anxiety throughout the process, it was indeed gratifying as they learnt different skills along the way – fundraising, teamwork, community service, and more importantly, that learning goes beyond the classroom.



2. External Support and Awareness Creation

Getting others to believe in one's vision and influencing them to join in the crusade of preserving the environment was the major learning for the students. It was not a course assignment, nor a mandatory engagement by the university, it was entirely their project, borne out of concern for preserving our environment. To the extent that corporations around the university commit-

ted their resources and showed up during the project launch speaks volumes to their convening ability.

Since the Eco-Alchemy is very close to the YSMA Museum, visitors on campus were encouraged to not only pass through the tunnel but also take a picture and post it on social media. This automatically makes them Eco-Ambassadors. Primary school pupils that visit the museum weekly were also not left out. The expectation is that they will go





back to their homes and communities to spread the message and put into action the importance of saving our environment.

3. Stakeholders Long-term Commitment

At the launch, the stakeholders' committed to supporting the project long term. Dangote Industries came back to support the World Environment Day 2025 by bringing more of their executives to the campus to explore additional areas of collaboration on sustainability. The university community also committed to reducing plastic footprints on campus and having collection points for plastics bottles. The Museum, whose

art collections are from at least 30% waste materials, is quietly but strongly amplifying the need to be environmentally conscious in this era of climate change.

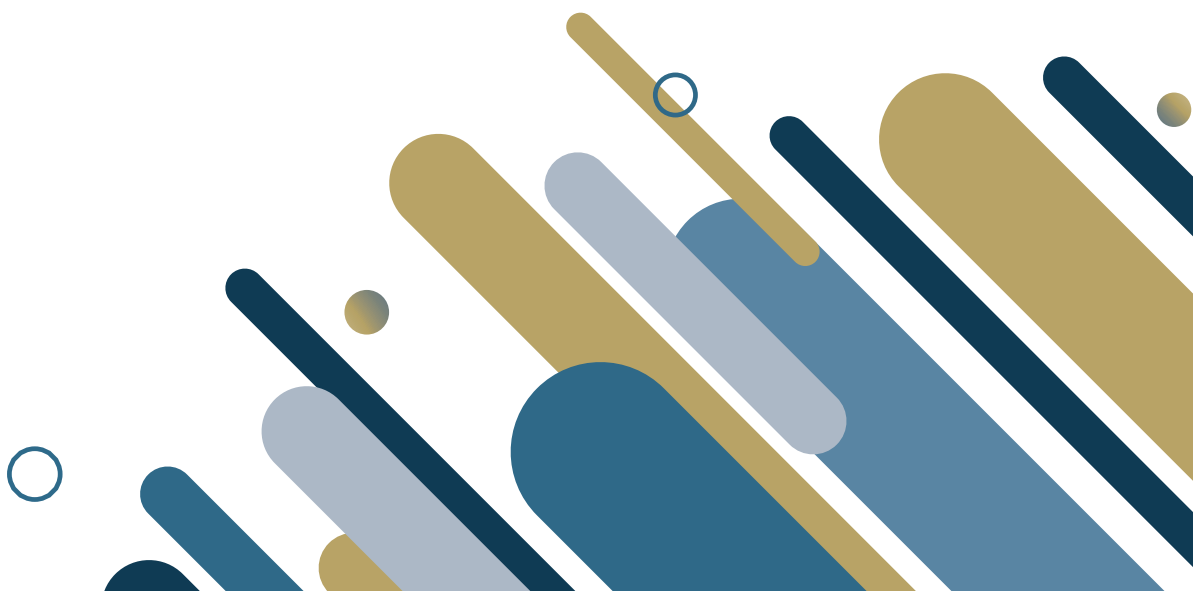
Positioning Higher Education Institutions (HEIs) as agents of social change does not have to be led by the university itself for it to be successful. The Pan-Atlantic University experience affirms that students can play such a role successfully. Exposing students to experiential learning and giving them the wings to fly is all that was needed. It changes their world view and seeing that their minute action can indeed translate into significant societal impact motivates further action.

Project-based learning enables students to think on their feet, connecting classroom learning with real life situations. In the process, a few students will find their purposes, and learning becomes meaningful. The Eco-Alchemy project also had un-intended outcomes. It brought out the best in inter-schools' engagement. Students from the school of media and communications, for instance, managed all the media related activities such as branding, spoken words, musical entertainers and being the masters of ceremony. It became a platform for students to discover their talents.

When our students are engaged in actionable learning like this, their ability to solve societal problems is enhanced. Engagement like this positions universities as emerging agents of social change, helping to redefine the outdated narrative of them as isolated ivory towers.

“

Project-based learning enables students to think on their feet, connecting classroom learning with real life situations. In the process, a few students will find their purposes, and learning becomes meaningful.



Peter Bamkole

Deputy Vice
Chancellor
(Admin)



**PAN-ATLANTIC
UNIVERSITY**

Dr. Peter Bamkole is the Deputy Vice Chancellor (Admin) at Pan-Atlantic. He previously served as the Chief Operating Officer and pioneered the Enterprise Development Centre (EDC) of the Pan-Atlantic University in January 2003 – now one of the top enterprise development centers in Africa. Trained as a Mechanical Engineer in the UK, with an MBA from IESE Business School in Spain and alumnus of Lagos Business School (Chief Executive Program), his over four decades of cognate experience spans both public and private sectors (Oil Industry, Water supply and Education). He obtained his PhD in Entrepreneurship and Innovation at the International School of Management (ISM) in Paris and consults widely in Sub-Saharan

Africa on entrepreneurship development and practice.

Peter is a fellow of the Corporate Governance Society of Nigeria and a member of the Chartered Institute of Directors. He currently chairs the board of Education Collaborative – West Africa Hub, Nigeria Climate Innovation Center, International Breweries Foundation and Global Entrepreneurship Network, Nigeria. He is an Independent Non-Executive Director of Zenith Bank, member of IIT Governing Council and Lagos State Research and Innovation Council among others.

His current book “Built by Enterprise” is a culmination of two decades of developing entrepreneurs in Nigeria.



From Ivory Towers to Impact Hubs

Reimagining the African University for a Transformative Future

To stay relevant in a changing world, African universities must evolve into entrepreneurial, impact-driven ecosystems rooted in engagement, innovation, and co-creation.

By Alfred Ngowi and Fredrick Matongo

The post-pandemic world calls for more than recovery—it demands reinvention. For universities in the Global South, this is a defining inflection point: will they cling to outdated models of knowledge dissemination, or boldly reimagine themselves as engines of inclusive innovation and societal transformation? At the Central University of Technology (CUT), the Entrepreneurship and Innovation Ecosystem (EIE) initiative offers a compelling answer. This pioneering model challenges the

traditional boundaries of higher education, repositioning the university as a catalyst for real-world change. More than just a strategic pivot, CUT's approach reflects a deeper ethos: that institutional relevance in the 21st century must be earned through deliberate co-creation with communities, industry, and government. This article examines the design, ethos, and early impact of CUT's EIE—offering both inspiration and a practical blueprint for reimagining African higher ed-



ucation for a future that is entrepreneurial, engaged, and transformative.

Repositioning the University in the National Development Agenda

In South Africa, like many African nations, universities have traditionally occupied a narrow role as knowledge repositories and degree mills. Yet, societal expectations have evolved. Governments now expect universities to be co-creators of innovation ecosystems, job creators, and engines of economic renew-

al. CUT's strategic shift toward entrepreneurship and innovation is, therefore, both timely and visionary. It acknowledges the limitations of a linear model of knowledge transfer and instead embraces an ecosystem approach, aligning with ACEEU's dimensions of institutional impact and forward-thinking engagement (ACEEU, 2024).

This strategy builds on earlier work at CUT that began to reframe institutional culture and systems towards innovation and entrepreneurship (De Jager, Mthembu, Ngowi & Chipunza, 2017).

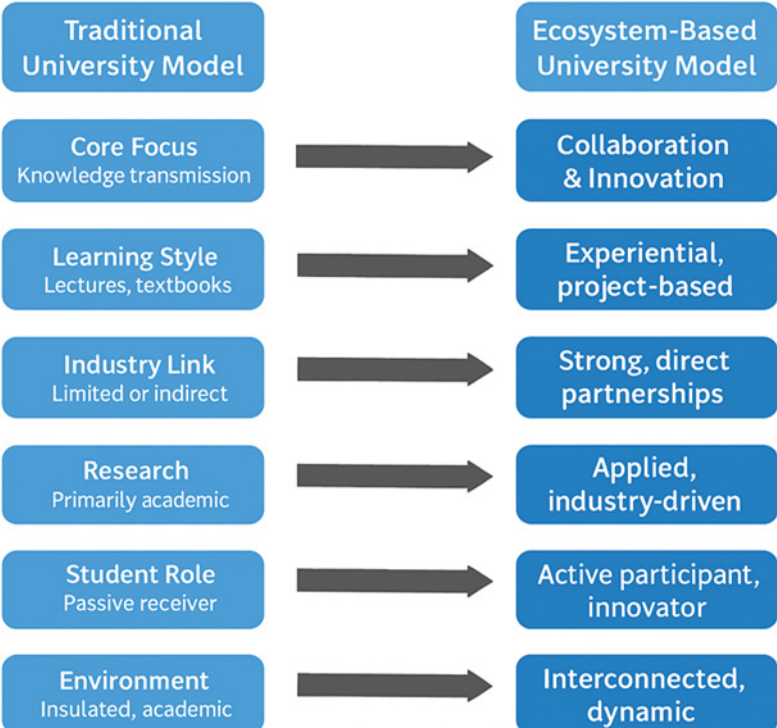


Figure 1: Traditional vs ecosystem-based university models

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EIE offers a powerful blueprint for universities aiming to remain relevant in a rapidly evolving world

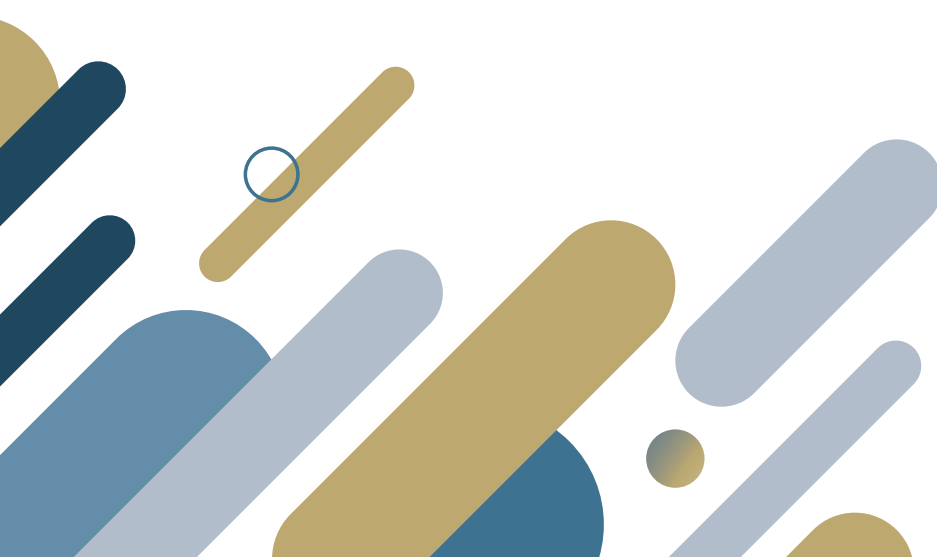
From Incubation to Ecosystem Thinking

What distinguishes CUT's initiative is its intentional design of an ecosystem that integrates students, academics, entrepreneurs, industry leaders, and policy-makers. It goes beyond hosting an incubation centre; it seeks to embed entrepreneurship into the DNA of the institution. The EIE is structured to enable a continuous feedback loop between innovation (idea generation), enterprise (business development), and impact (community and economic development).

The structure includes:

- An Innovation Centre (iGym) for ideation and early-stage prototyping
- Innovation Services (Business Clinic) offering mentoring, financing, and go-to-market support
- Engagement platforms such as policy roundtables and industry-university forums

This ecosystem model is consistent with the “triple helix” framework proposed by Etzkowitz and Leydesdorff (2000), which positions universities at the nexus of academia, industry, and government relations.



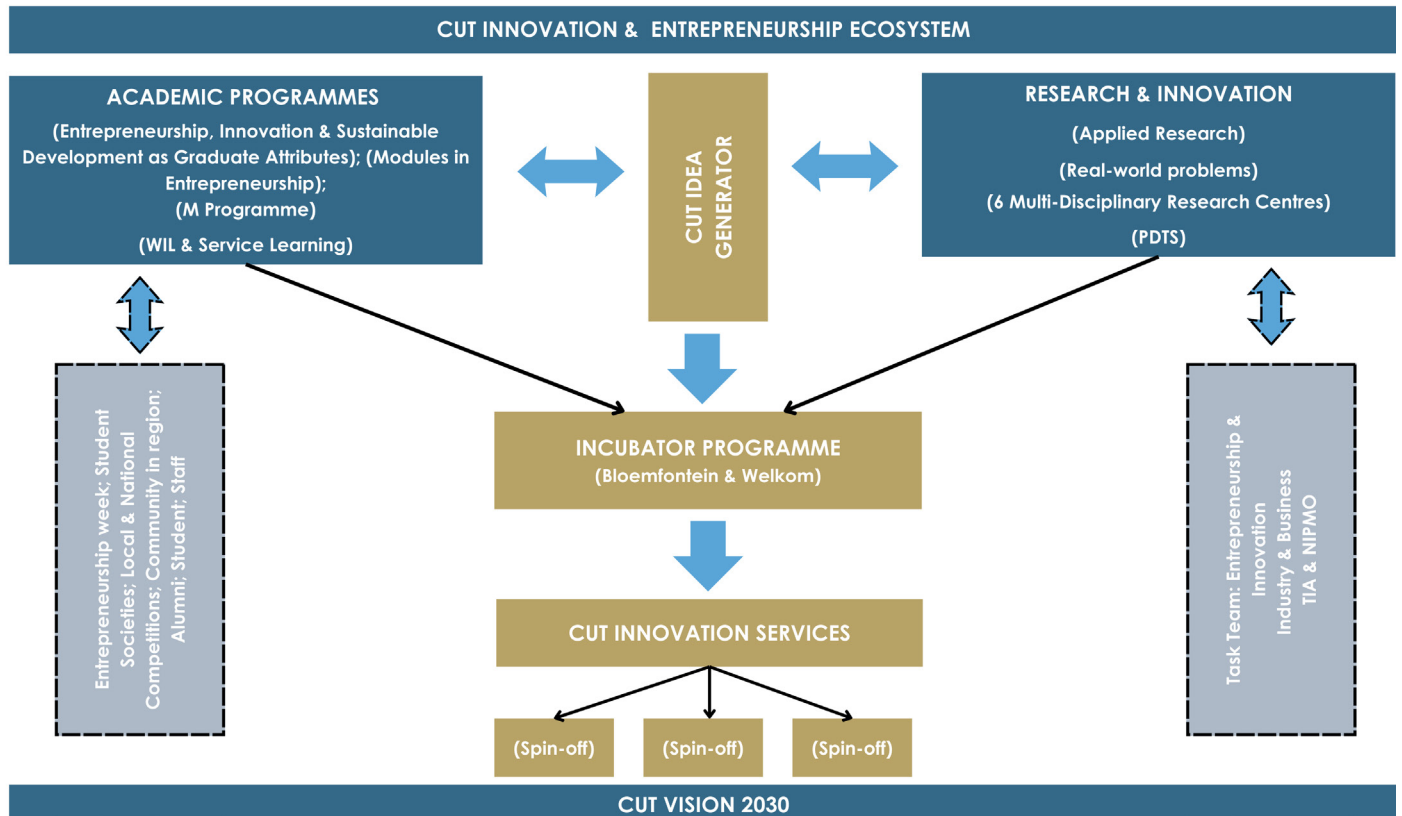


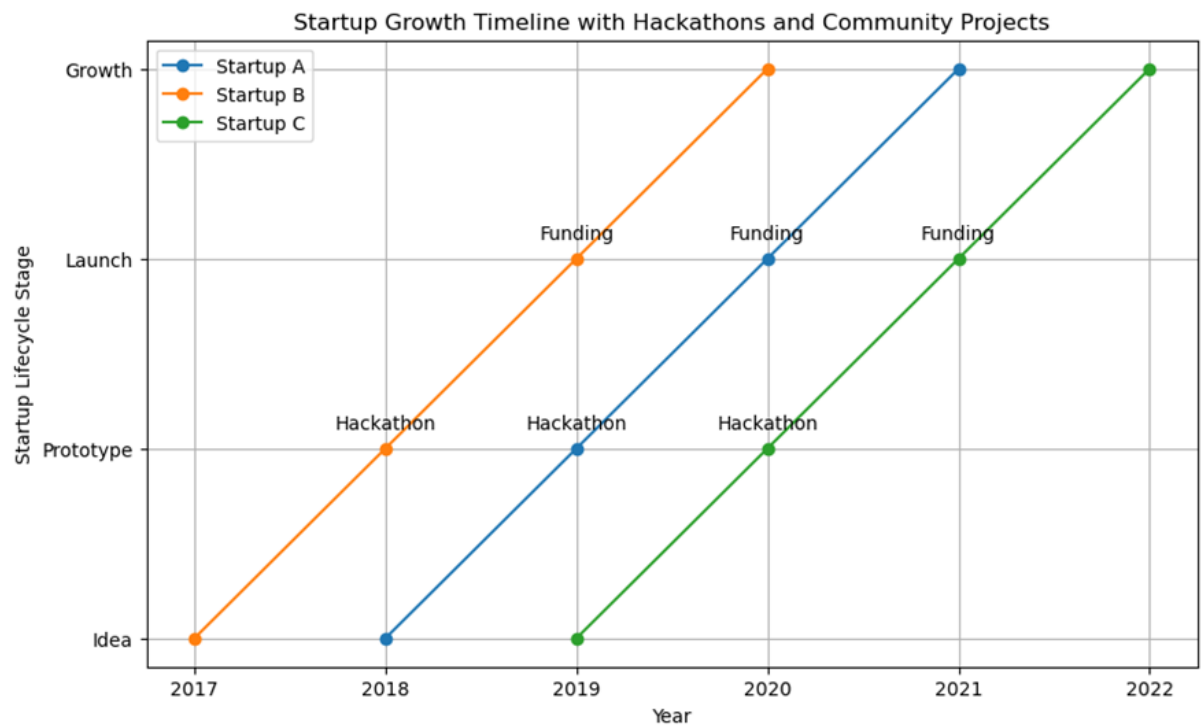
Figure 2: CUT Entrepreneurship and Innovation Ecosystem (EIE) structure

The Cultural Shift: Building Entrepreneurial Mindsets

Perhaps the most difficult yet essential transformation lies in shifting academic culture. Faculty development programmes have been introduced to support staff in embedding entrepreneurial and engaged pedagogies in their curricula. Meanwhile, students are offered transdisciplinary innovation challenges, hackathons, and start-up bootcamps, reinforcing that entrepreneurship is not the purview of business students alone. Early indicators are promising. Since 2022, CUT has supported over 70 student-led startups and facilitated over 25 community-based innovation projects. These

are not just statistics; they signal a reorientation of higher education from knowledge consumption to knowledge co-creation.

Figure 3: Infographic on startup growth, hackathon participation, and community projects



Creating Value Through Engagement and Co-Creation

The EIE also emphasises the university's role as a convener and facilitator. Working with rural cooperatives, urban entrepreneurs, and public agencies, CUT has supported projects in sustainable agriculture, digital health, and indigenous knowledge systems. This aligns with the global shift toward "engaged universities," as championed by the Talloires Network (2014) and UNESCO (2021), where engagement is not an afterthought but a core mission.

Crucially, CUT's approach recognises that engagement must be mutual and generative. Stakeholders are not passive recipients of expertise but active participants in designing solutions. This participatory ethos mirrors the "quadruple helix" innovation model, which includes academia, industry, government, and civil society in co-creating sustainable futures (Goddard & Kempton, 2011).

It features:

- CUT at the centre
- Academia: Academic Programmes, Research Centres
- Industry: Innovation Services Unit, PDTS
- Government: DESTEA, TIA Partnerships
- Civil Society: Community Engagement, Service Learning

Quadruple Helix Innovation Model with CUT Stakeholders

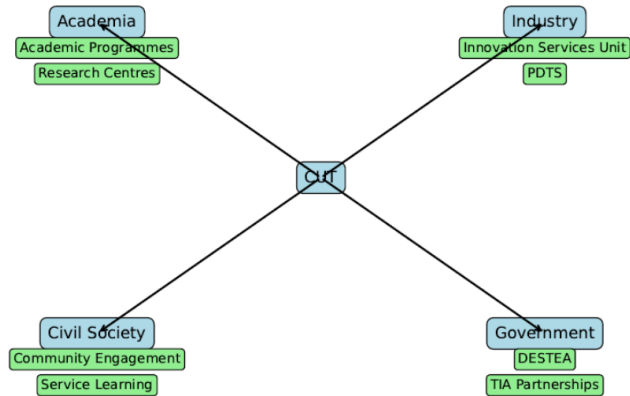


Figure 4: CUT Quadruple Helix model

To summarise, the Central University of Technology's Entrepreneurship and Innovation Ecosystem is more than a programme; it is a statement of institutional courage and relevance. It embodies a new narrative in African higher education: one that positions universities as dynamic, entrepreneurial, and deeply embedded in the fabric of societal transformation. As higher education worldwide grapples with disruption and the need for reinvention, CUT's EIE offers a replicable and adaptable model for those ready to move from rhetoric to action. The time has come for universities to reimagine their purpose—not as isolated ivory towers but as catalytic platforms for inclusive, sustainable futures.

A.B. Ngowi

Professor Emeritus



Professor A.B. Ngowi is a Professor Emeritus at the Central University of Technology (CUT), Free State, with an exceptional record of leadership in higher education, research, and industry. He has held key executive roles including Acting Vice Chancellor, Deputy Vice Chancellor for Research, and Dean of Engineering and IT at Central University of Technology (CUT).

With a solid academic foundation—holding engineering degrees from the University of Dar es Salaam, Chalmers University, and a PhD from the University of the Witwatersrand—he also expanded his expertise through advanced studies at MIT.

Professor Ngowi is a thought leader in emerging technologies, sustainable development, and circular economy, with over 150 scholarly publications and extensive postgraduate supervision. His mentees have gone on to pursue doctoral studies at institutions such as MIT, Princeton, and Cambridge. As a rated researcher by South Africa's NRF and editor of leading academic journals, he continues to shape discourse in entrepreneurship, innovation and digital transformation.

He is also a seasoned consultant, registered professional, and advocate of ethical business and good governance. With a rare blend of academic, corporate, and civic insight, Professor Ngowi exemplifies impactful leadership, innovation, and commitment to capacity building across Africa.

Mr. F. Matongo is the Director of the Innovation and Technology Transfer Unit at the Central University of Technology (CUT), Free State, South Africa. With a multidisciplinary background in biochemistry, entrepreneurship, and innovation law, he leads a dynamic portfolio encompassing technology transfer, prototyping, digital fabrication, and student entrepreneurship development.

Fredrick has spearheaded CUT's strategic initiatives such as the Entrepreneurship Development in Higher Education (EDHE) programme, the university's Pre-Seed Fund, and the integration of technology transfer systems with national priorities. He is particularly passionate about repositioning African universities as engines of innovation and economic empowerment and is instrumental in driving CUT's post-accreditation engagement with ACEEU.

His work focuses on bridging the gap between academic research and real-world impact, fostering inclusive innovation ecosystems, and mentoring emerging innovation leaders. Through his leadership, CUT continues to shape regional innovation narratives and contribute to national development goals.



F. Matongo

Director of the Innovation and
Technology Transfer Unit



Central University of
Technology, Free State

Entrepreneurship as a Core Mission

Shaping the Future of Higher Education Institutions

AIEP provides its entrepreneurial community with support tools ranging from the incubation of innovative ideas to expert advice that enables them to generate increased sales.

By Felipe Chaparro Serey

In an era defined by rapid technological transformation, uncertain labour markets, and pressing global challenges, the role of Higher Education Institutions (HEIs) must evolve. No longer can HEIs limit themselves to transmitting knowledge within traditional academic silos. To stay relevant and impactful, they must become enablers of innovation and entrepreneurship, preparing students, graduates, and lifelong learners to not only navigate but actively shape the future of work and society.

Entrepreneurship is not merely an economic function; it is a mindset and a methodology that empowers individuals to identify opportunities, mobilize resources,

and generate value. The future of HEIs lies in embracing this entrepreneurial paradigm at the core of their mission. This means shifting from offering entrepreneurship as an elective or a discrete track toward embedding it throughout institutional strategy, curricula, faculty development, and community engagement.

Responding to a Changing World

The demands of navigating a changing world require individuals with the capacity to innovate in their work and to undertake entrepreneurial ventures. Whether in response to economic disruptions, technological breakthroughs, or environmental imperatives, the future workforce must be equipped with the tools to





adapt and to lead. HEIs must therefore prepare their students not just for existing jobs but for a professional reality where roles are dynamic and value is created through innovation. This calls for a transformation in how education is delivered and what outcomes it prioritizes. HEIs must move beyond knowledge transmission and toward capability development, fostering resilience, creativity, opportunity recognition, and value creation. In doing so, they can position graduates as proactive contributors to societal and economic renewal, rather than as passive participants in a shifting job market.

One model pointing the way forward is Chile's AIEP Professional Institute, which has integrated entrepreneurship and innovation as key pillars of its educational approach. While AIEP's example is rooted in a specific national context, it offers universally applicable lessons for the global higher education sector. Future-ready HEIs must articulate a clear institutional commitment to entrepreneurship and innovation. AIEP, for instance, has placed these principles at the heart of its mission, combining them with goals of employability and social impact. AIEP's strategy has two objectives: (1) "To foster innovation and entrepreneurship to enrich formation" and (2) "To strengthen ties with the external

environment, creating value through innovation and entrepreneurship." This strategy clearly reflects its commitment to integrating innovation and entrepreneurship across academic and societal spheres, aligning educational outcomes with real-world impact and community engagement. Its Entrepreneurship Support Pathway is not an isolated program but a system-wide effort to foster entrepreneurial capabilities across the educational community, including students, alumni, and faculty.

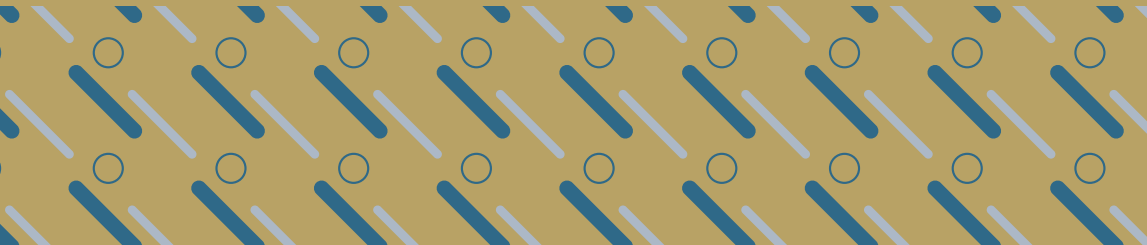
Rather than treating entrepreneurship as a specialist domain, HEIs should embed it in all areas of academic life. This means designing curricula that integrates opportunity-based thinking, venture development, and innovation skills into diverse fields of study - from engineering to education, from design to healthcare. Faculty must also be supported and incentivized to adopt entrepreneurial pedagogies and to engage with external partners who bring real-world challenges into the learning environment. Such structural integration ensures that entrepreneurship becomes part of the institutional culture and is seen not just as a career option, but as a way of thinking, learning, and acting.

HEIs of the future must also function as ecosystem enablers. They must build and sustain strategic partnerships with innovation agencies, accelerators, incubators, and industry actors to ensure that learning is not disconnected from practice. AIEP's collaboration with

national innovation entities, business leaders, and top-tier universities is a strong example of how educational institutions can build bridges to the broader entrepreneurial landscape. These external connections are not peripheral, they are essential. They provide students with mentorship, funding opportunities, co-working spaces, access to emerging technologies, and exposure to market dynamics. Through such networks, entrepreneurial learning becomes experiential and iterative, equipping students to move from ideation to implementation in real-world contexts. The institutional role thus shifts from being a provider of content to a curator of opportunity, helping students and graduates navigate complex systems of support, collaboration, and growth.

Global trends show a growing interest in entrepreneurship among younger generations. According to the GEM Chile 2021 report, 79% of the Chilean population sees entrepreneurship as a viable career option, and one in two individuals intends to start a business within the next three years. However, these aspirations often fall short of creating long-term impact: nearly half of early-stage startups report a lack of innovation in their business models.

This disconnect highlights a critical responsibility for HEIs: to ensure that entrepreneurial intention is matched with innovative capacity. It is not enough to encourage startup creation; institutions must cultivate



ventures that are novel, sustainable, and scalable. Programs must therefore go beyond basic business planning and provide structured support across the entrepreneurial journey. AIEP's three-stage model—incubation, acceleration, and business development, offers a useful framework. At each stage, students receive tailored support that helps them progress from concept validation to market entry and impact generation. This kind of guided development is crucial for

reducing failure rates and increasing the societal value of new ventures.

The future of entrepreneurship in higher education must be inclusive and purpose-driven. HEIs have a duty not only to prepare individuals for economic success but also to empower them to address broader social and environmental challenges. Entrepreneurship must be redefined as a tool for generating triple impact, creating ventures





that are financially viable, socially beneficial, and environmentally responsible. AIEP's entrepreneurship pathway explicitly pursues this kind of value creation. It equips students with concrete tools and knowledge aimed at improving competitiveness through innovation with societal relevance. This aligns closely with global efforts to meet the Sustainable Development Goals and positions HEIs as critical actors in the transition to a more just and sustainable world. Programs that emphasize ethics, social innovation, and environmental stewardship alongside market dynamics are better suited to the realities of the 21st century. They foster not just business founders, but changemakers. Rising to the challenge of fostering both entrepreneur-

ship and innovation, AIEP's Entrepreneurship Support Pathway advises over 5,000 entrepreneurs and small businesses each year. It offers targeted support across various fields of knowledge, equipping them with practical tools designed to drive innovative ventures with a triple impact: economic, social, and environmental.

Finally, HEIs must embrace the potential of lifelong, flexible, and technology-enabled education. As careers become longer and more fragmented, individuals will need ongoing access to entrepreneurial training and support. HEIs can no longer focus solely on degree-seeking students; they must also serve alumni, mid-career professionals, and underserved commu-

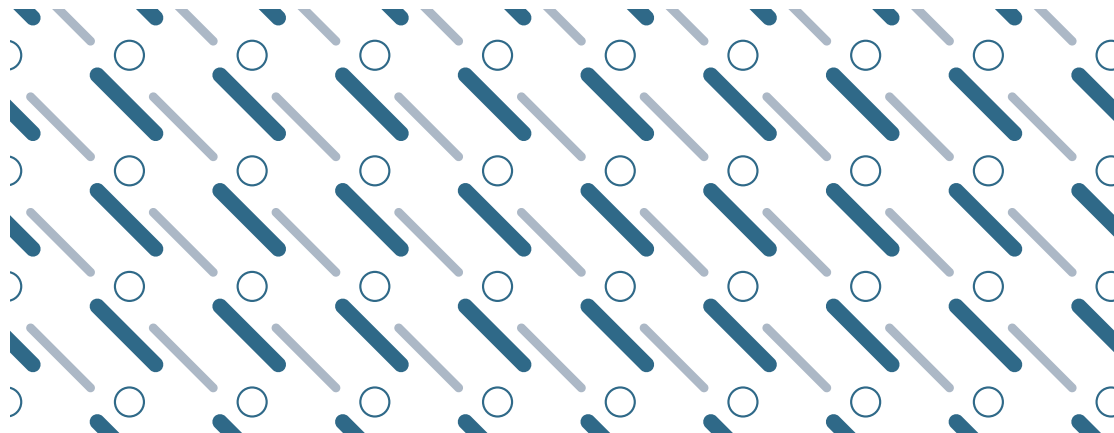
nities. AIEP's commitment to flexible, quality education powered by technology reflects this future direction. Online platforms, micro-credentials, modular learning paths, and blended models can allow institutions to extend their entrepreneurial impact far beyond the classroom. In doing so, HEIs become permanent partners in the journey of personal and professional development.

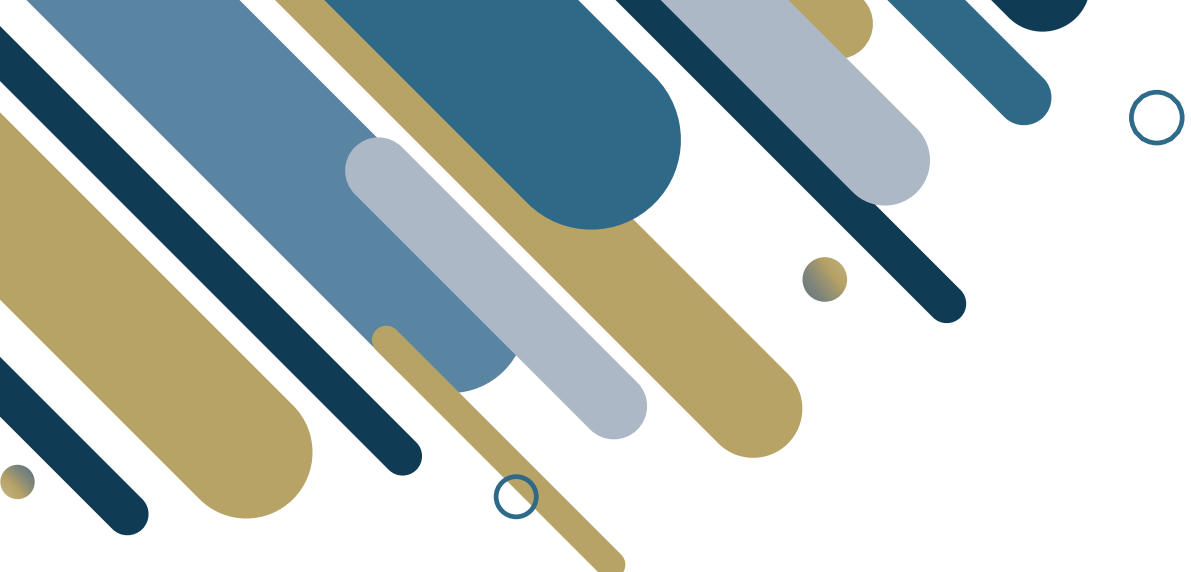


Future-ready HEIs must articulate a clear institutional commitment to entrepreneurship and innovation.

Conclusion: A Strategic Imperative for the Future

In conclusion, the future of higher education lies in its ability to foster entrepreneurship not as an add-on, but as a fundamental purpose. Institutions that embed innovation into their DNA, through practice-based learning, strategic partnerships, and impact-driven education, will be best positioned to empower the next generation of changemakers. AIEP's experience demonstrates that with intentional design, strong partnerships, and a clear vision, HEIs can build effective, scalable, and inclusive entrepreneurship pathways. As the world continues to change, the institutions that embrace entrepreneurship as a core mission will be those that not only endure, but lead.





Felipe Chaparro Serey

National Director,
Innovation and
Entrepreneurship
Department



Industrial Engineer, Master in Innovation & Entrepreneurship, Master in Business Administration. Executive and expert in R&D+i+e areas. Academic at the University of Chile.

I am a professional passionate about innovation. I have over 15 years of experience in the fields of innovation, technology transfer, and entrepreneurship. I have been an entrepreneur and a director of international companies, which has allowed me to have a comprehensive view of what entrepreneurs need to evolve and what companies need to innovate. Within the innovation and entrepreneurship ecosystem in Chile,

I have participated in various public and private technical roundtables, in the design and implementation of public policies, as well as the creation and implementation of R&D&I+T+E strategies in various higher education institutions and large companies. I currently direct the Innovation and Entrepreneurship Department at , and my efforts have focused on providing tools so our students can innovate and undertake entrepreneurship, and also on providing any entrepreneur the opportunity to bring their ideas to life.





A Vision for Inclusive Transformation

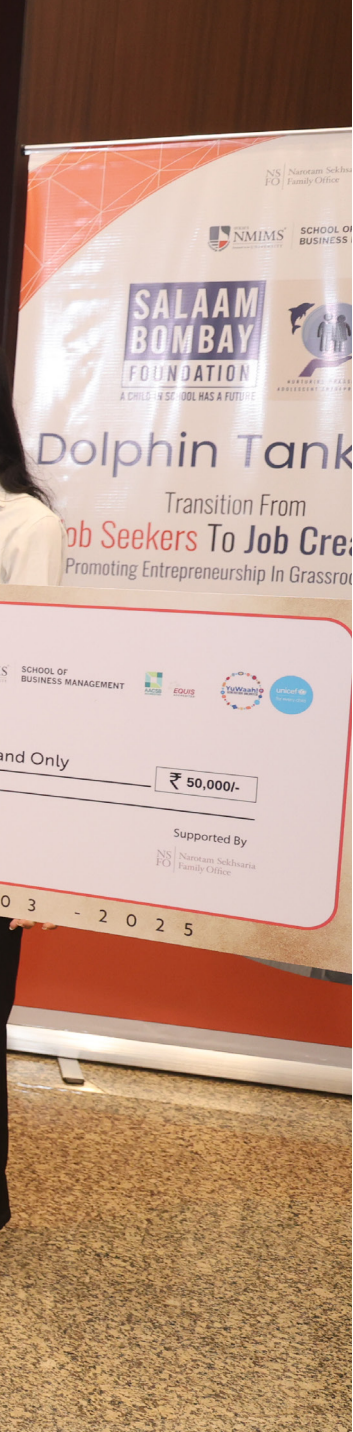
Where dreams take flight- Dolphin Tanki becomes Game Changer for young resource-poor entrepreneurs to create, inspire, and transform communities.

By Meena Galliara

Unemployment remains one of the most pressing challenges. According to the International Labour Organisation, more than 183 million people worldwide are unemployed (ILO, 2024). As of 2025, the International Monetary Fund projects that India will become the fourth-largest economy in the world (Jain, 2025). Complementing this economic momentum, the nation's median age stands at approximately 29.5 years, indicating its economic potential. Despite economic growth, expanding education systems and skill development

reforms, the youth unemployment rate in India is estimated to be 45.4 per cent (Prasad, 2024). This reality highlights the urgent need to transition from a job-seeking economy to a job-creating one. What India needs most are grassroots entrepreneurs who can generate employment and drive inclusive growth.

To accelerate economic growth, income and social equity, universities must position themselves as catalysts of entrepreneurial ecosystems which can



nurture high-growth 'unicorns' and early-stage 'baby-unicorns'. By embedding entrepreneurship in teaching and civic initiatives, universities can empower change-makers to create opportunities and contribute towards creating an inclusive and resilient economy. It is in this context that NMIMS School of Business Management (SBM) partnered with Salaam Bombay Foundation (SBF) to pioneer the Dolphin Tanki platform to enable resource-poor, grassroots adolescent entrepreneurs to seek funding support to scale their ventures. The initiative aligns with ACEEU standards on Student Engagement, Experiential Learning, and Community Impact, emphasising the integration of practical, hands-on experiences with meaningful societal contributions.

Promoting Grassroots Entrepreneurship among the Resource Poor

Since 2002, Salaam Bombay Foundation (SBF) has developed various initiatives to prevent school dropout, including vocational training in market-relevant skills such as Beauty & Wellness, Bakery & Confectionery, Electrical and Electronics Appliance Repair, Event Photography, Choreography, Dance Fitness, and Acting/Theatre. Adolescents aged 16–18 who demonstrate entrepreneurial aptitude and income-generating potential are selected for SBF's Grassroots Entrepreneurship Incubator. They receive mentoring and business management training to nurture their micro-businesses (Arora et.al, 2024). So far, 550 enterprises have been launched through the incubator, of which women head around seventy per cent (FPJ, 2025). As access to formal sources of capital and market linkages is available only to youth above 18, SBF, in collaboration

with NMIMS School of Business Management in 2022, launched the 'Dolphin Tanki', a dedicated seed-funding platform.

About Dolphin Tanki

Dolphin Tanki is a unique initiative inspired by 'Shark Tank'. It focuses on empowering resource-poor adolescents and teenagers to turn their entrepreneurial ideas into micro-enterprises. What sets Dolphin Tanki apart is its emphasis on learning rather than competition, and the compassionate approach of the jury, affectionately referred to as 'Dolphins'. This annual selection process positions the 'Tanki' as a metaphorical reservoir of opportunities and business support for the budding entrepreneurs.

Eco-system support

When adolescents establish their proof of concept and are ready to scale their ventures, they become eligible to participate in the Dolphin Tanki event. These aspiring adolescents are mentored by the MBA students from SBM, NMIMS, via the 'We Care – Civic Engagement Internship' programme. Inputs are provided in the areas of financial literacy, marketing, drafting B-plans and presentation skills. These foundational skills empower them to present their business ideas to a knowledgeable jury.

Most of our jury members are sourced from our Alumni network, who provide business and knowledge support to our young entrepreneurs. The institute provides the infrastructure, including classrooms, an auditorium and





logistical support, creating a conducive environment for conducting the event. Besides, contestants and NGO staff are able to interact with industry experts, potential investors, and mentors.

Post-Dolphin Tanki, entrepreneurs receive sustained mentorship and operational support from SBF staff to facilitate the growth of their ventures (Arora et.al, 2024).

Impact

Over the last four years, a few entrepreneurs have shifted from a home-based enterprise to the marketplace, either renting a commercial space or buying

shop space by securing loans from formal sources. Feedback from past winners has revealed that due to the training and equipment support provided by SBF, there is, on average, a two-fold increase in the income of the entrepreneurs. However, income fluctuates as per seasonal demands. The enabling ecosystem has helped in strengthening the partnership between the SBM and SBF to scale 96 enterprises. The total seed investment made so far in these ventures is INR 2.2 million (USD 25,000).



Agenda for the Future

Initiatives like Dolphin Tanki demonstrate the potential of universities to create ecosystems that can empower resource-poor adolescents and youth to become job creators. Universities' resources, expertise, and alumni networks can be leveraged to support grassroots entrepreneurs. By providing mentorship support through faculty, students, and alumni, universities can guide resource-poor entrepreneurs in refining their business models, developing operational strategies, and adopting digital solutions. Alumni network sup-

port can be crucial in facilitating market linkages, providing early-stage capital, mentoring, and regulatory guidance.

Universities offering technical courses can partner with local NGOs or government agencies to set up community incubators and provide necessary support to grassroots entrepreneurs. Such collaborations extend the reach of higher education institutions beyond campus, enabling entrepreneurs at the bottom of the pyramid to grow their businesses, generate employment, and drive inclusive local development. Docu-

menting success stories and best practices, as well as building collaborative networks, can enable universities to replicate models like Dolphin Tanki.

Dolphin Tanki envisions a world where every person with entrepreneurial potential, regardless of geography or economic status, has the opportunity to innovate and become an entrepreneur. Initiatives like Dolphin Tanki demonstrate how early exposure to entrepreneurial thinking can unlock potential in resource-poor adolescents, equipping them with creativity, critical thinking skills, and confidence.

To generate a large-scale, sustainable impact and strengthen local economies, initiatives like Dolphin Tanki must evolve from standalone efforts into scalable movements. This requires higher educational institutions to partner with NGOs or the government. Higher education institutions can serve as catalysts for empowering grassroots innovators and building vibrant entrepreneurial ecosystems by leveraging their diverse resources. Their entrepreneurial vision must extend beyond nurturing high-growth 'unicorns' to also supporting 'babycorns'—adolescent and teenage entrepreneurs from under-resourced communities. In this context, engaging faculty and students can be a game-changer in promoting entrepreneurship as a transformative force for creating an inclusive and sustainable future.



To accelerate economic growth, income and social equity, universities must position themselves as catalysts of entrepreneurial ecosystems which can nurture high-growth 'unicorns' and early-stage 'babycorns'.

Arora Gaurav, Menon Sneha, & Galliara Meena (2024). Transformation from Job Seekers to Job Creators: Salaam Bombay Foundation's Entrepreneurship Model for Resource-Challenged Urban Adolescents. In Meena Galliara and Sayatan Khanra (Eds.). Fostering Skill Development: Key to India's Inclusive Growth. Imperial Publications, pp 37–68. Available at <https://sbm.nmims.edu/editedbooks>

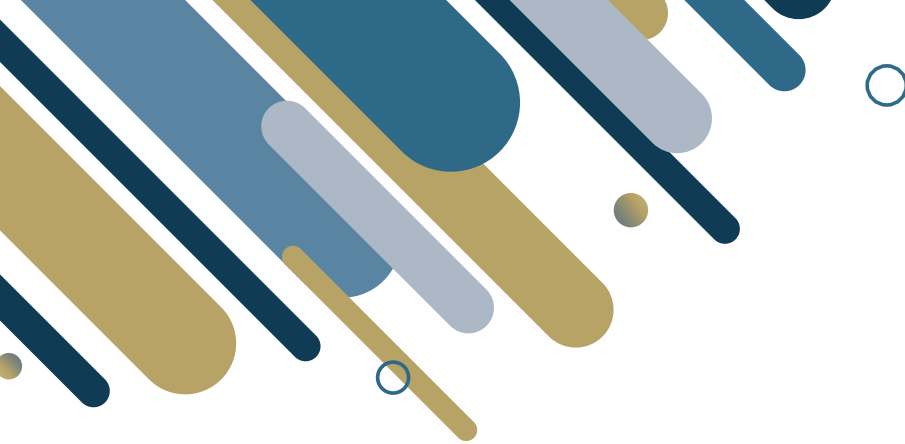
Free Press Journal. (2025, March 23). Salaam Bombay Foundations Dolphin Tanki 4.0 helps 20 underprivileged youth pursue entrepreneurial dreams. Free Press Journal. <https://www.freepressjournal.in/india/salaam-bombay-foundations-dolphin-tanki-40-helps-20-underprivileged-youth-pursue-entrepreneurial-dreams>

International Labour Organization. (2024). World Employment and Social Outlook: May 2024 update. https://www.ilo.org/sites/default/files/2024-06/WESO_May2024%20-%20Final_30-05-24_2.pdf

Jain, S. (2025, May 27). Explained in charts: India to become 4th largest world economy soon. What's the road ahead to No.3 spot? The Times of India. <https://timesofindia.indiatimes.com/business/india-business/explained-in-charts-india-to-become-4th-largest-world-economy-soon-whats-the-road-ahead-to-no-3-spot/articleshow/121418460.cms>

Pandit, N. (2025, April 17). Dolphin Tanki is slum kids' Shark Tank | Mumbai news - Hindustan Times. Hindustan Times. <https://www.hindustantimes.com/cities/mumbai-news/dolphin-tanki-is-slum-kids-shark-tank-101744891078952.html>

Prasad, N. (2024, May 29). India's youth unemployment rate among highest in world, says ex-CEA; Netizens call it 'heights of propaganda'. Mint. <https://www.livemint.com/economy/indias-youth-unemployment-rate-among-highest-in-world-says-ex-cea-netizens-call-it-heights-of-propaganda-11716977982254.html>



Meena Galliara

Professor and
Director, Jasani
Center for Social
Entrepreneurship
& Sustainability
Management

Meena Galliara is an alumnus of the Tata Institute of Social Sciences and has over three decades of teaching and research experience. As an educator, her work aims to create a new generation of business leaders and social entrepreneurs who are knowledgeable about and committed to creating a sustainable society. She has been instrumental in anchoring the social sensitivity agenda of NMIMS through various academic, research and field intervention activities. She has undertaken sponsored studies and consultancy assignments in the areas of sustainability, CSR, social audits, strategy review and management

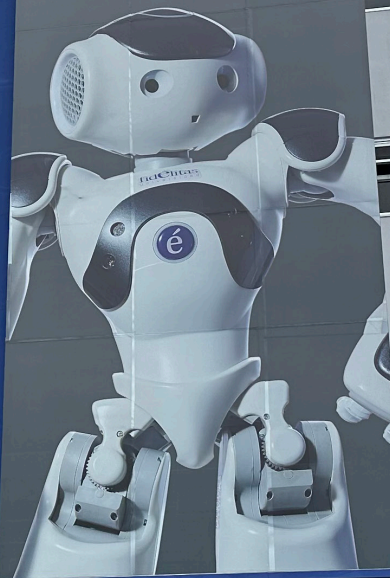
of social enterprises. As part of her field extension work, she has been instrumental in setting up the Atal Incubation Centre at NMIMS. Dr. Galliara has handled international teaching assignments at Reitaku University, Japan, University of Athens, Greece, Euromed Management School, and NEOMA Business School, France. Apart from academics, Dr. Galliara serves as a Trustee on the Board of International Resources for Fairer Trade. She is also appointed as an Independent Director on the Board of Excel Industries and is appointed as a Special Invitee to the Board of Bombay Chambers of Commerce and Industry.



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53 Centro Educativo

Training Entrepreneurs Means Creating Agents of Change

Individuals with the ability to transform ideas into tangible solutions.

Preparing students for the future requires teaching them how to create it.

By Emilia Gazel Leiton

Institutions of higher education face a great responsibility: it's not just about teaching but about empowering. Universities should transform into hubs that foster innovation, creativity, and societal change. At the core of this metamorphosis is entrepreneurship, which is more than just creating companies; it represents a new mindset, a personal resource, and a means to positively influence communities.

At Fidélitas University in Costa Rica, we believe that the future of entrepreneurship and its integration within higher education is not just promising but essential to the very DNA of education, as envisioned by our institution. As proud members of Babson Collaborative for Entrepreneurship Education, a worldwide research network led by Babson College, a leader in entrepre-

neurship education, we have opened up significant opportunities for innovation, scholarship, learning, engagement, cultural exchange, and professional development by collaborating with students, educators, and entrepreneurs globally to nurture an entrepreneurial spirit in our community.

Entrepreneurship as a Foundational Element of Universidad Fidélitas' Educational Model

At Fidélitas University, entrepreneurship is not merely an extracurricular activity; it is woven into the core of our educational framework, which is based on the STEM methodology focused on learning by doing and under the CDIO model (conceive, design, implement, and operate). Although students pursue degrees in Eco-

nomics, Engineering, Social Sciences, or Computer Science, we persistently encourage them to cultivate an entrepreneurial mindset: detect opportunities, analyze market needs, solve problems, harness creativity for prototyping, take the first step, engage actively, strategize, navigate uncertainties, and create value for others.

Entrepreneurship is integrated into the syllabi of the different majors through basic courses and specialized subjects. Our professors are trained on a regular basis in entrepreneurial teaching methodologies through Babson and put into practice experiential learning techniques such as design thinking and case studies, among others. As pioneers in Computer Science and Engineering, our students engage in simulated startup activities supported by the advanced technological resources available at our campus.

Learning by doing

We firmly believe that entrepreneurship is best understood through practical experience. Consequently, at Fidélitas, we host and facilitate entrepreneurship fairs where our university community can showcase and promote their projects.

In addition, we promote FideEmprende, which is an initiative where students compete by presenting their business ideas and ventures, which must follow crucial criteria including being innovative, sustainable, and disruptive. A panel of specialized judges evaluates and selects the top two proposals, which receive awards as motivation.

All these experiences strengthen the self-confidence, ignite creativity, and reflect our strong dedication to education that is experiential, practical, and oriented toward results.

Hub for creativity and collaboration

An important feature of our entrepreneurial ecosystem is the Innovation Building at Fidélitas University. It is much more than just a physical facility; it stands for our dedication to fostering student creativity and interdisciplinary collaboration.

This building is equipped with high-tech resources for creating prototypes, digital fabrication, and multimedia production. Students from every major can bring their ideas to life here, whether they involve groundbreaking products, mobile apps, or solutions aimed at social betterment. This is a space where concepts turn into tangible outcomes, where innovation is not just imagined but built.

Social transformation starts with the way we educate

At Fidélitas University, we are committed to ensuring that every student, regardless of their origin or discipline, has an open door to opportunities for innovation and leadership. That is why we encourage them to address both community issues and to think about global challenges. It is also why, as Central American representatives of the Mars Challenge, a Space Talent Lab initiative that immerses us in a deep reflection on what is essential for human survival, we invite students from all the universities of the country to participate in this





hackathon devising solutions applicable both to space exploration and to energy sustainability on Earth.

Connection is key

The future of entrepreneurship in higher education cannot be achieved in isolation. It requires collaborative networks between the academic body, the productive sector, the government, and civil society. In fact, our alliance with the Babson Collaborative is an example of this model, which allows us to connect with a global community, exchange ideas, and apply good international practices.

We also cultivate local alliances with companies, governmental organizations, and non-governmental organizations, ensuring that innovation is anchored in reality and is impact-oriented.

A forward vision

Higher education institutions must adopt a systemic and strategic approach. This approach should include an institutional commitment, the updating of study programs and teacher training on entrepreneurship, investment in infrastructure with advanced technology, and the linking of the community with real problems and public and private entities.

As the leading university in the country in Engineering and Computer Science, we believe that higher education institutions have the potential to be engines of change. We can achieve this by not only teaching what it is but also helping students to imagine and build what it could be. When our university prioritizes entrepreneurship and collaboration, the next generation is empowered not only to succeed but also to create a positive impact in their context.







Emilia Gazel Leiton

Rector

Emilia Gazel holds a Master's degree in Educational Administration and a Diploma in STEM–STEAM Teaching Methodology. She has completed international training in areas like virtual education, leadership, agile methodologies, design thinking, artificial intelligence, and entrepreneurship at Babson College. With an impressive 33 years in private higher education, she has taken on various roles, including preschool and primary teacher, university professor and program director, Director of University Extension, Secretary General, and Rector.

For the last 17 years, she has worked at Fidélitas University, where she has led academic innovation as Director of Academic Processes, Vice-Rector, and now, as Rector. Her extensive experience

includes designing and accrediting academic and technical programs, as well as implementing the STEM methodology at the university level. Additionally, she serves as an international peer reviewer for EQUAA.

Ms. Gazel has actively participated in international forums as a panelist and has been honored with the Casa Feingenblatt Award for her significant contributions to education. Her certifications come from esteemed institutions in Chile, Spain, Colombia, and the U.S. (Laspau–Harvard). Known for her ethical leadership, sharp decision-making skills, and unwavering commitment to transforming education through STEM, entrepreneurship, and the integration of AI in teaching, Emilia Gazel is truly a leader in her field.



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Innovation with Purpose

Public University, Entrepreneurial Spirit, and Sustainability

Universidad Nacional de Cuyo offers a transformative education that nurtures talent, promotes sustainability, and fosters social commitment.

By Esther Lucía Sanchez

At UNCUIYO, we understand that Higher Education must be a co-creation, where knowledge becomes action and the entrepreneurial spirit is cultivated as a tool for social transformation. The commitment of this Argentinian public university is expressed through the formation of individuals capable of innovating with ethical purpose, generating value in their communities, and building fairer, more inclusive, and sustainable futures.

Along that path, we take on an inescapable responsibility: to create real conditions for talent to flourish and for knowledge to translate into well-being. Our vision is anchored in the idea of a university engaged with its environment, one that promotes critical and creative thinking and does not settle for interpreting reality, but actively seeks to transform it.

Today, in a global context of uncertainty, rising inequality, and unprecedented environmental challenges, universities are called to reinvent themselves. For this reason, Higher Education must, by definition, be a driver of innovation. Our university sees research, science, and technology as the foundation for innovation and global development. We value entrepreneurial leadership, environmental commitment, and collective creativity as pillars of a university that looks to the future with hope, courage, and a sense of opportunity.

Innovation and the entrepreneurial spirit are mutually reinforcing phenomena that thrive in institutional environments where freedom of thought, the desire to act, and the will to transform are shared values.

At UNCUIYO, we believe that to innovate is to dare to imagine what does not yet exist. It is the courage not to follow trends, but to set them. That's why we see entrepreneurship as a tool for personal fulfilment and collective transformation. We bring this vision to life through programs like *Emprende U*, which nurtures ideas with social, environmental, and economic impact from an early age, integrating high school and university students, teachers, and actors from the pro-

duction ecosystem. *Emprende U* is a formative process whereby leadership, teamwork, and creative thinking are cultivated through a collaborative and friendly team-based format.

Creativity, understood as a driver of change, often arises in times of crisis. In Argentina, we know this well. We face complex scenarios, but we also possess a tremendous capacity for resilience. Given the right incentives, freedom to experiment, and supportive networks, innovation flourishes. This is evident in the experiences of entrepreneurs who, even in adverse contexts, have managed to develop sustainable, scalable, and locally-rooted solutions.

For the creative spark to ignite, we must foster safe spaces for dialogue, and the exchange of diverse perspectives. In this sense, the university must be a fertile ground for imagining the new. With this conviction, we promote disruptive innovation programs such as the development of a digital transformation platform based on X-Road, which improves institutional management processes, reduces bureaucratic burden, and advances a model of a smart, agile, and people-centred university.

Our commitment to transformation is also reflected in our drive toward a sustainable university. The upcoming implementation of the Yolanda Law will be a key step in equipping our community with environmental competencies, promoting active and conscious citizenship, and embedding sustainability across all university policies. We have also initiated a system to measure our institutional carbon footprint, aiming

to guide strategic decisions toward responsible and transparent environmental management. This effort adds to actions we have been taking for years across our campus—such as the UNCUIYO Separates its Waste project, which made us the first university in the country to manage its waste with social inclusion.

The recently inaugurated Community Family Medicine Residency represents yet another form of social innovation. Its design reflects a comprehensive view of health focused on community care, prevention, and territorial connection. It brings together scientific knowledge, social commitment, and excellent training, proving that to innovate also means to draw closer to people and their real needs.

Finally, internationalization of thought and regional cooperation is essential to amplifying the impact of our actions. In this direction, UNCUIYO was honoured to host the Second Summit of the Cartagena Group, a space that brings together Latin American universities committed to transformative higher education—open to disruption and capable of imagining new futures from the Global South.

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At UNCUIYO, we believe that to innovate is to dare to imagine what does not yet exist. It is the courage not to follow trends, but to set them.



UNCUYO is part of international networks and consortia funded by the European Union to develop projects that address current challenges such as climate change (CLIMAR) and social innovation and sustainability (HEADCET). It leads research and technological development projects that foster the creation of high-level knowledge with a real impact on the socio-productive environment and the well-being of society.

We are convinced that the university of the future is built today—through every decision that promotes purpose-driven entrepreneurship, meaningful innovation, and sustainability as a guiding principle. At UNCUYO, we embrace this challenge with passion, with people at the centre of our vision, and with the conviction that every policy, every initiative, and every project can be an opportunity to create well-being.

Universities must become true ecosystems of possibility—spaces where ideas can take root, knowledge becomes a tool for empowerment, and dreams turn into action. Our mission as a public university is to ensure that every student can develop their potential with freedom and commitment.

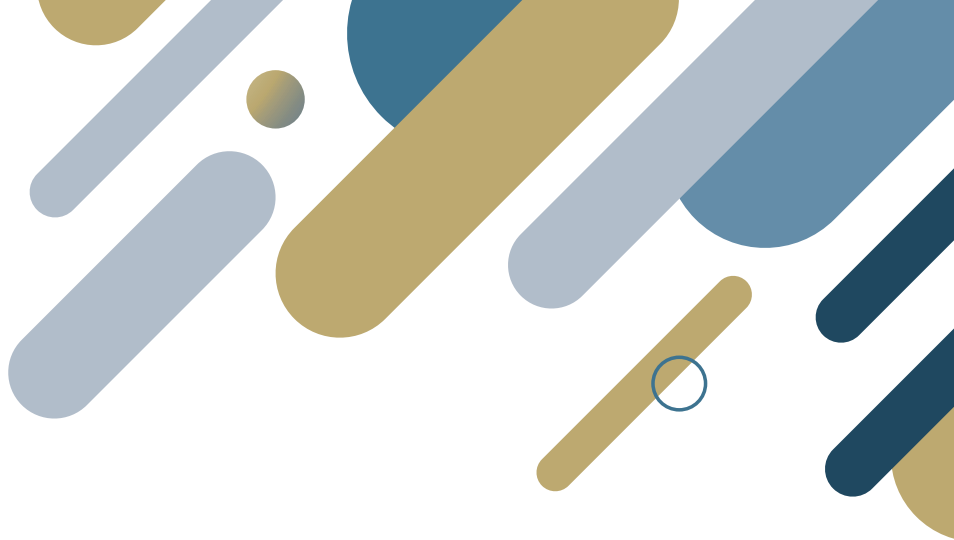
The world needs bold, committed, and generous universities. Universities that not only respond to challenges but anticipate them—ones that not only educate but also inspire big dreams. Universities must develop well-rounded citizens capable of leading the transformations needed to build a better world for all.

That is the path we have chosen to follow—with hope, strategic vision, and the deep conviction that a public, entrepreneurial, and sustainable university is a transformative force capable of opening doors to new worlds and possible futures.









Esther Lucía Sanchez

Rector, National University of Cuyo

Esther Lucía Sanchez is a Certified Public Accountant. She graduated from the National University of Cuyo (UNCuyo), where she also earned a Master's Degree in Social Psychology. Since August 16, 2022, she has served as Rector of the university, elected by direct vote. Previously, she was Dean of the Faculty of Economic Sciences at the same university from 2014 to 2022.

She has directed several postgraduate programs, including the Specialization in Cost and Business Management, Master's in Agribusiness Management, and Master's in Sustainable Development and Social Responsibility. In addition, she is a recognized researcher, with a notable track record in projects focused on mesoeconomic cost analysis and social responsibility in the wine industry. She is the author of over 40 research papers and book chapters on wine industry management, cost analysis, and professional training in economic sciences. Since 2022, she has served as President of MetaRed S Argentina, a Sustainability and Social Responsibility Network for Universities across several Ibero-American countries, promoted by Universia and Santander Universidades. In November 2023, she was appointed Vice President of the International Institute of Costs.





How to Train Entrepreneurship Trainers?

The Colombian Case History of the University Entrepreneurship Symposium of the University Entrepreneurship Network – REUNE

By Oscar Domínguez González, Julián Esteban Gutiérrez Rodríguez & Maria Carolina Ortiz Riaga

In Colombia, the University Entrepreneurship Network REUNE, one of the academic networks promoted by the Colombian Association of Universities (ASCUN), formally began its activities in Bogotá in 2009. ASCUN brings together almost one hundred higher education institutions across the country, seeking to improve

academic quality, protect university autonomy, and promote the pursuit and dissemination of knowledge (ASCUN, n.d.). Currently, approximately 80 universities participate in REUNE, developing entrepreneurship promotion activities in most of the 32 departments that comprise the national territory.

The Network focuses on enhancing entrepreneurship in higher education's key functions: training, research, and connecting institutions with their surroundings. It is a space for articulation and interaction between HEIs that develops and strengthens tools, models, and capabilities in innovation and entrepreneurship to generate proposals for change in the social, academic, and business spheres. (REUNE, n.d.)

In 2013, the International Symposium on University Entrepreneurship (SIEMU) was proposed to train entrepreneurs. The symposium has been held annually, with the 12th edition scheduled for 2024. SIEMU aims to explore and engage with international ecosystems and experiences that support and enhance university entrepreneurship in the country. In addition to the symposium, educational institution directors and entrepreneurship leaders have undertaken international trips to countries such as Finland, Canada, Brazil, and Chile. However, these trips were disrupted by the pandemic and have not resumed.

The Symposium is structured each year around an axis selected by the organizing universities, and guests who can contribute their experience and knowledge to this theme are selected.

2013 – The Role of Entrepreneurship in Universities

2014 – University-Business-State Relationship

2015 – Creating Society from Knowledge

2016 – Necessarily Global and Disruptive Education

2017 – The Power of Regions

2018 – Entrepreneurial University

2019 – Knowledge and Society: Challenges and Trials

2020 – The Virtual Entrepreneurial Classroom as a Space for Transformation: Dynamics and Challenges of Teaching in an International Context

2021 – Higher Education and Entrepreneurship as an Engine of Transformation for Economic Reactivation

2022 – The Power of Regions +5

2023 – Sustainability: Changes and Challenges Towards the Future

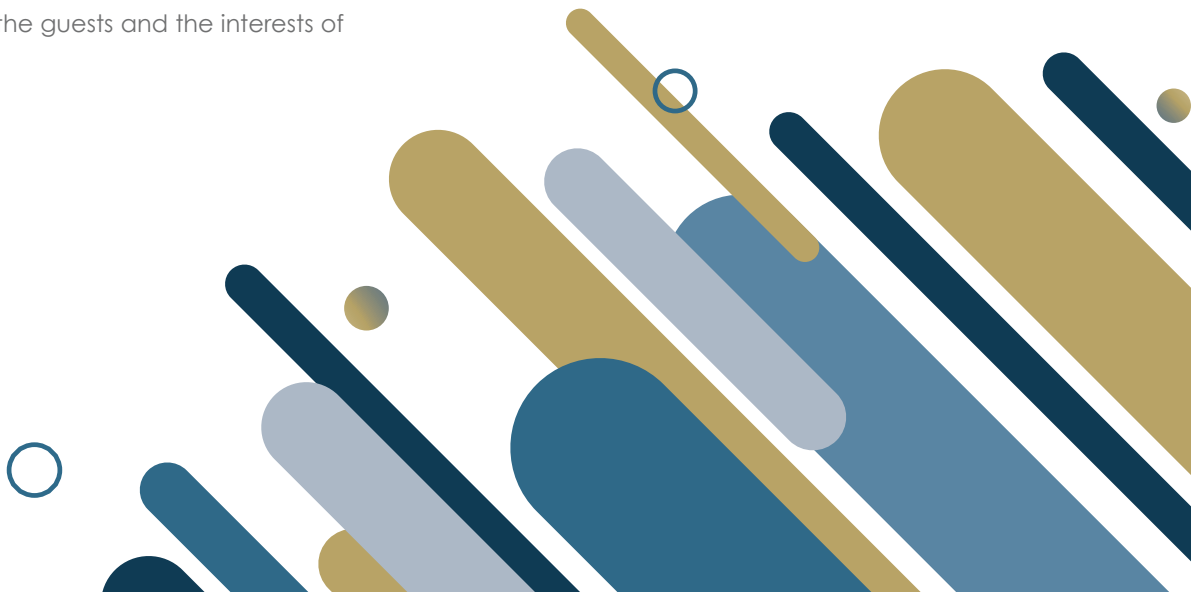
2024 – Popular Digital Revolution

According to studies conducted by REUNE, professors teaching entrepreneurship courses in Colombian higher education institutions may lack expertise in the subject or real-world business experience. Therefore, the symposium highlights successful experiences and best practices in training entrepreneurs and fostering connections between universities and their stakeholders worldwide. Over the past 12 years, the event has welcomed guests from numerous Latin American countries, as well as the Netherlands, Germany, Spain, Finland, the Czech Republic, Taiwan, and Rwanda.

Colombia is a centralized country, meaning most opportunities are concentrated in Bogotá, its capital, and three other major cities. However, one of the benefits of the Symposium has been its presence in other medium and small towns across the country, which have taken advantage of this to link their academic events with this strategy. The results have been reflected in increased attendance and participation from each region's university population and business sector. Thus, the organization of each Symposium demands careful planning of travel, dates, and schedules in accordance with the profile of the guests and the interests of each territory.

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Ultimately, SIEMU exemplifies how a sustained, collaborative initiative can strengthen the entrepreneurial ecosystem within higher education, contributing to regional development and fostering global engagement.



The symposium funding was initially provided by universities interested in joining the organization and establishing international connections. In recent years, other public and private organizations, such as regional governments and chambers of commerce, have also joined, recognizing the event's impact on their respective regions. This is mainly because the work extends beyond training professors. Workshops are held annually with students and entrepreneurs in different areas, and networking activities involve members of various university communities in each region. The Symposium has thus evolved into a collaborative space, drawing its success from the coordinated efforts of multiple stakeholders interested in fostering entrepreneurship in Colombia.

The COVID-19 pandemic was a turning point for the Symposium. With limited travel and financial resources, we had to rethink our strategy. We formed partnerships with three international networks: the Latin American Network of Innovation and Entrepreneurship of CLADEA (RLIE), an Ibero-American network focused on promoting entrepreneurship (MOTIVA), comprised of university professors from various countries; and a network of Spanish universities researching small and medium enterprises (FAEDPYME). Each network brought experts to conduct about 20 academic activities over four days in 2020. We also organized virtual networking exercises and achieved the highest attendance record for both SIEMU and the specific events of each organization. While each network resumed its activities after the pandemic, the experience paved the way for future collaborations and taught us valuable lessons.

The impact of SIEMU has been significant and diverse. It has strengthened the capacity of university entrepreneurship representatives, leading to connections between national and foreign institutions to develop student mobility programs, invitations for our professors to represent Colombia at international events, and collaboration on joint research projects in Latin America.

Cooperation agreements have also been signed between representatives of foreign universities and Colombian institutions hosting the Symposium. These agreements allow access to financial resources and promote teacher mobility in areas that would not have had these opportunities otherwise. The invitation to participate in this book results from ACEEU's involvement in the 7th Symposium. These impacts not only improve university management but also benefit entrepreneurs by providing access to contacts, calls for proposals, and business opportunities worldwide. This brief review hopes to show that SIEMU, one of REUNE's flagship activities, is a continuous effort that has responded to the need to strengthen entrepreneurship capabilities in Colombian higher education institutions.

The text describes the history and evolution of the International Symposium of University Entrepreneurship (SIEMU) in Colombia, an initiative that emerged in 2013 as part of the University Entrepreneurship Network—REUNE. REUNE brings together approximately 80 Colombian universities and seeks to strengthen entrepreneurship through education, research, and environmental engagement.





SIEMU was created to train entrepreneurship trainers. It takes place annually and has different central themes. The event has welcomed international participants from various countries and has been characterized by decentralizing its activities and bringing knowledge to different regions of Colombia. Initial funding came from organizing universities, but various public and private organizations have joined in recent years.

During the COVID-19 pandemic, SIEMU reinvented itself by establishing partnerships with other international networks (RLIE, MOTIVA, and FAEDPYME), enabling record attendance. The symposium's impact has been significant, including international cooperation agreements, student mobility programs, joint research pro-

jects, and networking opportunities for entrepreneurs. SIEMU has become a flagship activity that strengthens entrepreneurial capabilities in Colombian higher education.





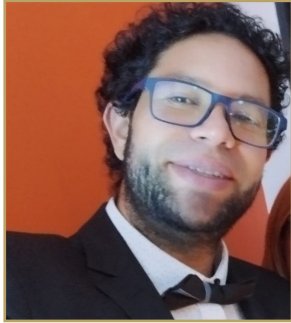
Oscar Domínguez González

Executive Director
of the Colombian
Association of
Universities - ASCUN

Agronomist Engineer, specialist in Environmental Education Planning and Strategic Management, and holder of a Master's in Education. He has served as a project consultant for the Ministry of National Education, SENA, PRONATTA, ECOFONDO, and the National Royalties Fund.

He held positions as Director of the Education Fund of the Meta Department, Financial Deputy Director of the Meta Tourism Institute, and Director of the Villavicencio campus of Antonio Nariño University.

He also served as Head of Promotion and Development, Director of IDEAD, Vice-Rector of Resources, and Rector of the University of Los Llanos for two terms. In 2016, he was appointed Secretary General of the Colombian Association of Universities, and he is currently the Executive Director of ASCUN.



Julián Esteban
Gutiérrez
Rodríguez

Professor, researcher
and consultant

Entrepreneur, psychologist, consultant, researcher, and holder of a master's degree in technological projects, he has extensive national and international experience in entrepreneurship and innovation. He has served as a professor, manager, and researcher at renowned higher education institutions in Colombia and other countries, working on diverse topics such as rural entrepreneurship, technology-based ventures, technology management, peace-oriented entrepreneurship, leadership, startups, scaleups, empowerment, and innovation (private, open, and public). He has also led institutional strengthening processes and the development of innovation ecosystems in various regions around the world.

His professional profile has been shaped through training programs conducted in Europe, North America, Asia, and Africa, which have provided him with a broad perspective on global affairs. For over a decade, he has led institutional collaboration processes in higher education through active participation in academic and knowledge networks focused on innovation and entrepreneurship.



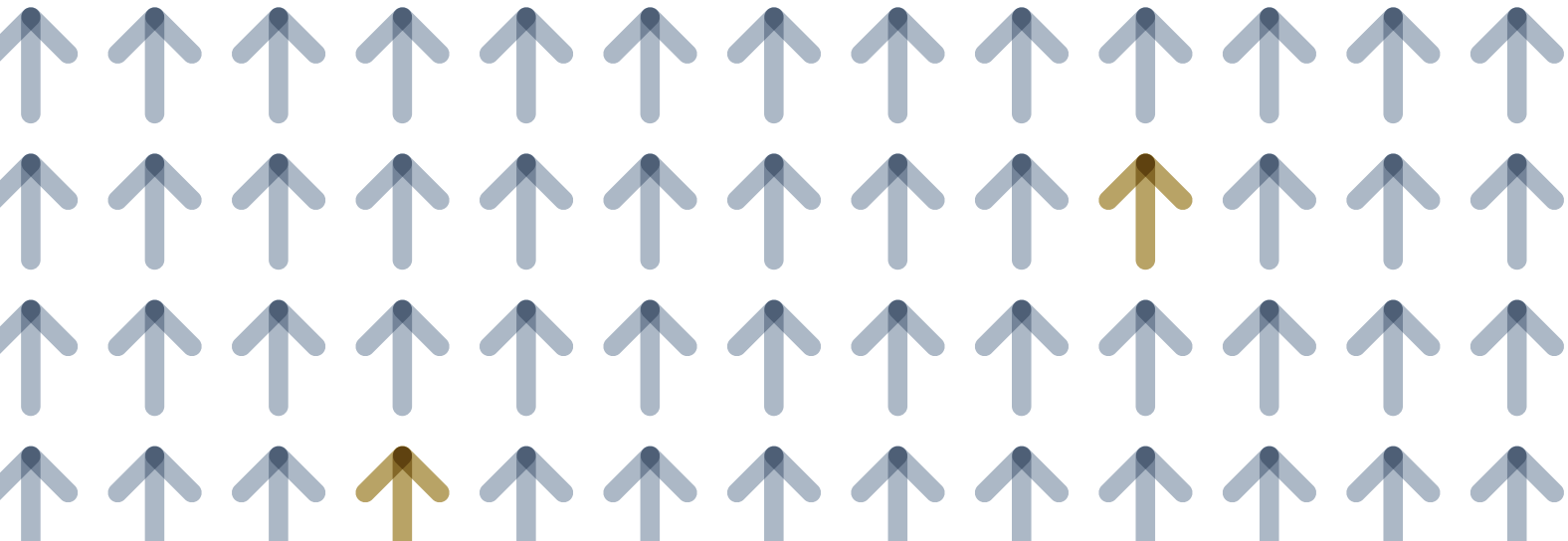
Maria Carolina
Ortiz Riaga

Academic
coordinator of
REUNE

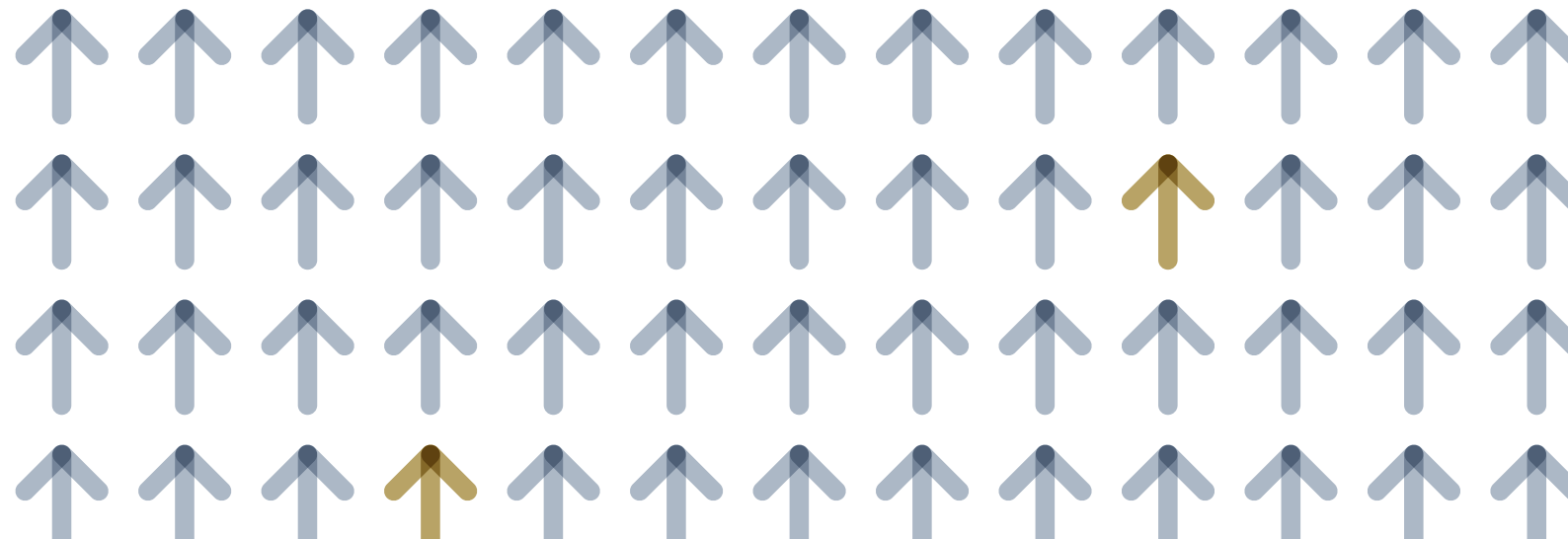
Psychologist and Master's in Education from the Pontificia Universidad Javeriana, specialist in University Teaching from the Universidad Militar Nueva Granada. Teacher and researcher in entrepreneurship and innovation issues in undergraduate and graduate programs at the Faculty of Economic Sciences of the Universidad Militar Nueva Granada. Researcher of the Group of Contemporary Studies in Management and Organizations. Author of several books and scientific articles on entrepreneurship and innovation. She was Director of Outreach and Social Projection of the Faculty and Economic Sciences and Coordinator of the Center for Innovation and Entrepreneurship Neogranadino - CIEN, a position from which she developed various activities to strengthen entrepreneurship at the University, among which the creation of the Club of Neogranadinos Entrepreneurs and the proposal of the Neogranadinos Business Network stand out. Coordinator of social internships in entrepreneurship. Member of the University Entrepreneurship Network – REUNE since July 2011. Coordinator of the editorial project of the network From U to E: Experiences of University Entrepreneurship in Colombia. Academic coordinator of REUNE.

Higher Education

ENTRE PRENEUR SHIP



Section 2





SPECIAL RECOGNITION AWARD Pioneering Leadership in Transformative Education





Entrepreneurial and Engaged University

Creating opportunities in challenging times.

The education landscape is dynamic, with external factors often beyond one's control. Entrepreneurial universities that can pivot and adjust to changing circumstances are better positioned to find opportunities in adversity.

By Abdul Jalil Ghazali

In recent decades, the landscape of education has changed tremendously. Disruption caused by Covid-19 created a sudden opportunity to look at alternative platforms for access to education. The face-to-face learning that was the mainstream suddenly disappears overnight. Different universities reacted differently to adapt to the challenging time. Those that were agile and entrepreneurial quickly reset the button and adopted online learning as the mainstream platform. Those that did not struggled to survive.

It was a phase of uncertainty for many but for some it was the era where creativity, innovation and being entrepreneurial became a necessity. "Sustainabil-

ity not profitability" became the mantra. Accessibility to education was the priority – not physical presence in classrooms. Universities engaged with core stakeholders as part of their social responsibility to ensure that no students were left behind. It was 2 years of uncertainty, experimentation and adaptation for the education landscape.

Fast forward, entrepreneurial-driven institutions continue to fast track the development of innovative learning platforms. It creates efficiency through a hybrid learning model - a synergistically-balanced model between face-to-face and self-paced online learning and assessment. Universities that are entrepreneurial effectively engaged their stakeholders in the adoption of the new hybrid learning model as the mainstream learning platform – online learning is no longer a second-rate education.

With strong demand for lifelong learning, courses and programs are offered in learning chunks that can be made affordable and stackable. It opens opportunities for adult learners to upskill and re-skill for job market competitiveness. Physical boundaries and facilities are no longer a limitation. Cross-border education through collaborative partnership opens opportunities for multi-institutional recognition and accreditation, thus creating new opportunities in the creation and development of new globally developed talents.

The entrepreneurial university re-directs its investments from physical to digital infrastructures and talent development. Cloud-based infrastructures were adopted and talent, be it faculty members or administrative

support staff, was quickly re-skilled to adapt and adopt the new technologies and applications such as AI and blockchain. Students were introduced to self-administered learning tools and online assessment tools, allowing them to be self-driven, self-paced independent learners.

For the entrepreneurial and engaged university, the way forward includes:

1. Active engagement with all stakeholders, especially policy makers, for agility and fast adoption of new technologies and learning approaches without sacrificing quality and integrity.
2. Sustainable Innovation Ecosystems: prioritize innovations that are not just profitable but socially inclusive—such as affordable healthcare and education tools for underprivileged communities.
3. Measuring Dual Impact: In addition to commercialization metrics of most entrepreneurial universities, institutions can adopt social responsibility indicators, such as community impact and sustainability practices.
4. Government Support for Social Research: Enhanced research funding landscapes can be broadened to support socially-engaged projects alongside commercialization.
5. Community-Centered Curriculum: Embedding service learning, civic engagement and cultural competencies into courses that can equip



students to think critically and act responsibly as future entrepreneurs and leaders.

6. Regional Inclusion: institutional partnerships with universities locally and abroad in promoting cultural competencies.
7. Dynamic Multi-Stakeholder Governance: include voices from civil society, indigenous groups, and local governments in decision-making bodies to maintain a balance between market-driven interests and social needs.

A Malaysian Way Forward:

In Asia, and specifically in the context of Management and Science University Malaysia, the paradox of the entrepreneurial and engaged university is not a contradiction to be solved, but a tension to be managed. MSU recognizes that true excellence lies not just in revenue generation or global ranking, but in societal relevance and producing a balanced, holistic and well-rounded graduate. This is achieved through a holistic student learning experience that encompasses academic excellence, global mobility programs, enriching personal competency such as leadership, en-



trepreneurship, cultural competency, teamwork and concerns for environment and society. All 17 SDGs became the pillars in developing MSU 2G culture – giving and gratitude.

The entrepreneurial spirit coupled with active stakeholder engagement creates a balanced perspective of measuring success beyond financial performance. It infuses concerns for stakeholder benefits, integrity and sustainability. True balance will happen when it strives as a purpose or value-driven university. The long-term impact is now visible as MSU is now ranked 101-200 in the THE Impact Ranking University in 2025 as compared to ranking of 300 in 2024. Among the significant initiatives are the RM50 million scholarships allocation to deserving students and MSU Medical Centre Healthcare Equity for Affordable and Rapid Treatment (HEART) program – a Public-Private Partnership to provide access to medical treatment to under-privileged communities.

To summarise, in navigating disruption and uncertainty, entrepreneurial and engaged universities like MSU demonstrate how higher education can remain agile,

inclusive, and impactful. By shifting investments from physical to digital infrastructure, empowering learners, and embedding sustainability and social equity into their core mission, such institutions redefine success beyond traditional metrics. The MSU example shows that integrating stakeholder engagement, innovation, and purpose-driven leadership creates a model of higher education that is both globally relevant and locally responsive. As higher education evolves, the true mark of excellence lies not only in innovation or rankings but in the transformative value delivered to students and society.



Abdul Jalil Ghazali

Senior Vice President Industrial Linkages & Entrepreneurship

Prof. Dr Abdul Jalil Ghazali is currently the Senior Vice President of Industrial Linkages and Entrepreneurship for Management & Science University (MSU). He oversees MSU's industry-university partnerships, entrepreneurship ecosystem and development of Start-Ups in emerging technologies such as blockchain and is actively involved in university strategic initiatives. He has over 36 years of experience in various management roles in auditing and human resources in both local and multinational companies and had served PETRONAS, PROTON, JT International, Maybank Investment Bank and FGV IFFCO. He holds a Doctor in Business Administration (DBA) from University of Newcastle, Australia and is a Certified Professional Coach. He also serves as a committee member within the Federation of Malaysian Manufacturers Malaysia. Socially, he is active in social works related to elevating education, economic and social needs of under-privileged communities in Malaysia, Indonesia and Cambodia.







Entrepreneurship Rewired

*How AI is Redefining the
Next Gen of Innovators*

*AI is transforming entrepreneurship:
empowering diverse founders, reshaping
education, and driving ethical, inclusive
innovation across the globe.*

By Fehmida Hussain

In the rapidly changing field of information technology, artificial intelligence (AI) stands at the forefront of technological advancement, significantly influencing all sectors, including entrepreneurship. Unlike traditional discussions that treat AI as a mere support tool, this article presents AI as an active co-creator, redefining entrepreneurial education, enabling inclusivity, and transforming business strategies at a systemic level. It highlights a shift from

capital-intensive innovation to agile, tech-augmented entrepreneurship where access, ethics, and global diversity take centre stage. In particular, the focus is on entrepreneurial education and the critical role that higher education institutions play in equipping students and fresh graduates interested in entrepreneurship with essential AI literacy. This perspective provides a unique and comprehensive view of how AI is cultivating the next generation of entrepreneurs who are not only digitally fluent but also socially conscious and globally connected.

A notable example of sharing best practice in action is the Middlesex University Dubai Innovation Hub (MIH, nd), a university-led ecosystem fostering interdisciplinary entrepreneurship and innovation. Positioned at the intersection of academia and industry, the Hub brings together students, researchers, and external partners to co-develop solutions with real-world impact. Its model encourages knowledge exchange across sectors, embedding entrepreneurial thinking into diverse disciplines and demonstrating how higher education can drive inclusive innovation at scale.

Democratizing Innovation Through AI

Historically, entrepreneurship required substantial capital, extensive networks, and deep industry knowledge. Today, AI is levelling the playing field, enabling individuals from diverse backgrounds to initiate and scale businesses with unprecedented ease. No-code and low-code platforms empower non-technical founders to develop sophisticated digital products using natural language prompts. Tools like ChatGPT, Midjourney,

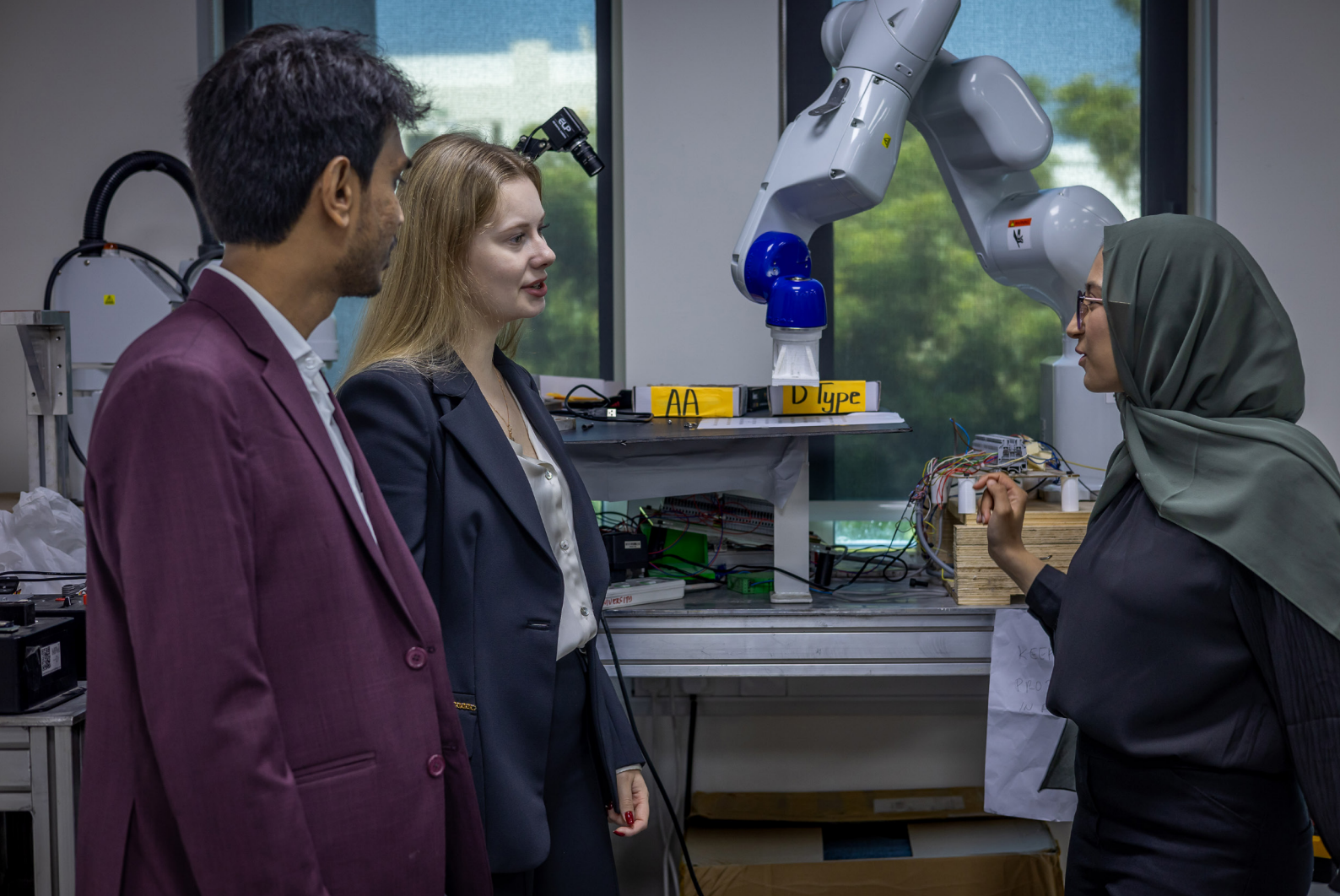
and Synthesia facilitate content creation, customer engagement, and branding, functions traditionally requiring specialized teams. This democratization extends to small businesses, with many utilizing AI-enabled tools to enhance efficiency and reduce operational costs (Fossen et al., 2024).

AI as a Strategic Partner in Entrepreneurship

Beyond operational assistance, AI serves as a strategic partner in the entrepreneurial journey. Advanced analytics platforms such as Tableau and Power BI now incorporate AI to provide predictive insights, enabling entrepreneurs to make data-driven decisions with greater confidence. These tools analyse vast datasets to identify market trends, customer preferences, and potential risks, offering a level of strategic foresight previously accessible only to large corporations. AI tools like Salesforce's Agentforce AI and Sales Coach enhance client research and interactions, offering real-time advice to support entrepreneurs (Gindert & Müller, 2024).

Transforming Entrepreneurial Education

The infusion of AI into entrepreneurship necessitates a reimagining of educational paradigms. Institutions are increasingly integrating AI literacy into their curricula, recognizing the importance of equipping future entrepreneurs with the skills to leverage AI effectively (Vecchiarini & Somià, 2024). Initiatives like Heartland Forward's AI curriculum and Google's Growth Academy: AI for Education provide mentorship and resources, emphasizing the role of AI in creating personalized



and accessible learning experiences. In addition, platforms such as OpenAI's Learning Platform and Khan Academy's Khanmigo tool offer personalized AI tutors that help learners grasp foundational and advanced AI concepts, fostering self-directed and inclusive learning (Khan Academy, 2023; OpenAI, 2024). These platforms are instrumental in building early-stage competencies for future innovators and serve as complementary re-

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AI empowers a new generation of innovators by democratizing access to resources, enhancing strategic decision-making, and fostering inclusivity.

sources alongside formal university programs. Through the Middlesex Innovation Hub, entrepreneurship education is further enriched through the strategic embedding of artificial intelligence (AI) into both teaching and venture development processes. Students are encouraged to explore AI as both a tool and a topic—leveraging generative design, predictive analytics, and automation in the creation of business models and solutions. This integration equips learners with the technical fluency and critical perspective needed to innovate responsibly in AI-driven economies. One of the Hub's flagship programmes, MDXcelerator, provides an intensive venture-building experience for students and alumni, supporting them from ideation to launch. Participants benefit from mentorship, seed funding, and access to cutting-edge facilities. MDXcelerator exemplifies how universities can cultivate entrepreneurial capacity within their communities by providing structured, supported pathways into innovation and enterprise.

Ethical Considerations in AI-Driven Entrepreneurship

As AI becomes integral to entrepreneurship, ethical considerations gain prominence. Concerns surrounding data privacy, algorithmic bias, and transparency necessitate a conscientious approach to AI integration. Frameworks such as the European Commission's "Ethics Guidelines for Trustworthy AI" emphasize embedding fairness, accountability, and inclusiveness into AI systems. Ethical AI practices are crucial for building consumer trust and fostering long-term success (Fenwick et al., 2024).

Fostering Inclusive Entrepreneurship Through AI

AI's potential to foster inclusive entrepreneurship is evident in its application across diverse demographics and geographies. In developing regions, AI facilitates access to resources and markets, enabling local entrepreneurs to overcome infrastructural challenges. Language translation tools and AI-driven logistics platforms support cross-border collaborations and streamline operations. Furthermore, AI tools amplify the voices of underrepresented groups, offering tailored mentorship and support to promote diversity and equity (Gupta et al., 2023).

Redefining the Entrepreneurial Mindset

The integration of AI into entrepreneurship necessitates a shift in mindset. Modern entrepreneurs must blend creativity with technological acumen, embracing a data-driven approach to innovation. This entails a willingness to experiment, adapt, and collaborate. The lean startup methodology, emphasizing iterative development and customer feedback, aligns seamlessly with AI's capabilities and supports rapid prototyping and market analysis.

Artificial intelligence is not merely a tool but a transformative force redefining entrepreneurship. By democratizing access to resources, enhancing strategic decision-making, and fostering inclusivity, AI empowers a new generation of innovators to tackle complex challenges and drive economic growth. To fully harness AI's potential, stakeholders must invest in

education, prioritize ethical considerations, and cultivate an entrepreneurial culture that embraces technological advancement. In doing so, society can ensure that the future of entrepreneurship is not only innovative but also equitable and responsible. Hence, as we stand at the intersection of AI and entrepreneurship, the imperative is clear: future-ready entrepreneurs must be equipped not just with business acumen, but with AI literacy, ethical awareness, and a collaborative mindset. The institutions that nurture this new wave of entrepreneurs, especially those in higher education, will play a pivotal role in shaping inclusive, adaptive, and impactful innovation ecosystems.

Fossen, F. M., McLemore, T., & Sorgner, A. (2024). Artificial intelligence and entrepreneurship. *Foundations and Trends in Entrepreneurship*, 20(8), 781–904.

Gindert, M., & Müller, M. L. (2024). The impact of generative artificial intelligence on ideation and the performance of innovation teams.

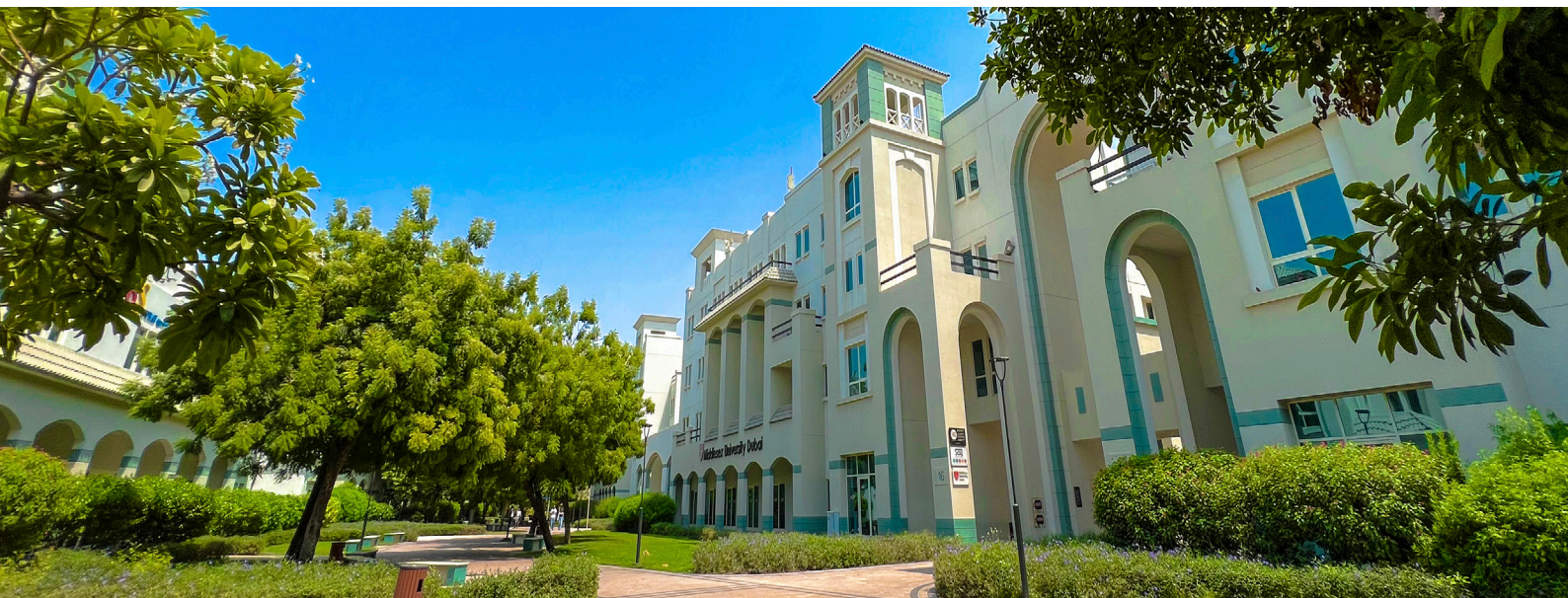
Gupta, Brij B. & Gaurav, Akshat & Panigrahi, Prabin Kumar & Arya, Varsha, 2023. "Analysis of artificial intelligence-based technologies and approaches on sustainable entrepreneurship," *Technological Forecasting and Social Change*, Elsevier, vol. 186.

Khan Academy. (2023). Meet Khanmigo: AI guide and tutor. <https://www.khanacademy.org/khan-labs>

OpenAI. (2024). OpenAI Learning Platform. <https://openai.com/blog/learning-platform>

Somià, Tatiana & Vecchiarini-Piazza, Mariangela. (2024). Navigating the new frontier: the impact of artificial intelligence on students' entrepreneurial competencies. *International Journal of Entrepreneurial Behaviour & Research*. 30. 10.1108/IJEBR-08-2023-0788.

Middlesex University Dubai <https://www.mdx.ac.ae/mih>





Fehmida Hussain

Deputy Director
Engagement and
Student Experience

Professor Fehmida Hussain is the deputy director of student experience and engagement and head of the Computer Engineering and Informatics department at the School of Science and Technology at Middlesex University Dubai. She is also the head and founder of the enterprise called the Center for Innovation in Human Experience and Middlesex University Dubai's Innovation Hub. She has a DPhil in Informatics from the University of Sussex, UK, is a Senior Fellow of the Higher Education Academy, UK and a Chartered IT professional awarded by the BCS - The Chartered Institute for IT. Her professional experience of over 30 years comprises senior leadership roles and teaching in higher education, performing academic research, and working in the Information Technology industry. Her research areas are Responsible Computing and ethics, Cognitive Modeling, Health Informatics, E-Learning, and digital forensics. Professor Fehmida Hussain has been invited to give many talks at conferences and panels. She actively works in the areas of promoting Women in STEM and other social causes and is a senior member of the Emirates Digital Association for Women.

Redefining Entrepreneurship and Engagement in Higher Education

How Entrepreneurship and Engagement reshape higher education through inclusive innovation, student start-ups, and meaningful community Impact

By Keolebogile Motaung



In my experience, entrepreneurship and engagement are no longer optional elements in higher education: they are essential. Over the years, I have come to understand that true transformation happens when we empower our students and staff to go beyond academic excellence and step into roles as innovators, problem-solvers, and active community contributors. My journey, shaped by years in research, academic leadership, and entrepreneurial practice, has shown me how universities can become living laboratories that fuel economic growth, address societal challenges, and promote social justice.

As someone deeply involved in both the academic and entrepreneurial ecosystems, I have seen firsthand the impact of integrating traditional knowledge with modern science to create meaningful, context-specific innovations. From supervising postgraduate students to commercialising plant-based biomedical products, I have committed myself to building bridges between disciplines, sectors, and communities. This article is not just a theoretical reflection: it is grounded in practice, informed by my work as Chairperson of the EDHE Community of Practice for Entrepreneurship Research, as a board member of the Technology Innovation Agency, and as founder of Global Health Biotech. Drawing on the ACEEU Accreditation process, I share my perspective on what it truly means to lead and live the entrepreneurial university mission.

When I started this journey, I knew that transforming higher education would not come from policy documents alone: it had to come from doing the work, from the ground up. My work across institutions, particularly

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Entrepreneurship and engagement are deeply personal for me. They are about changing lives, not just ticking boxes.

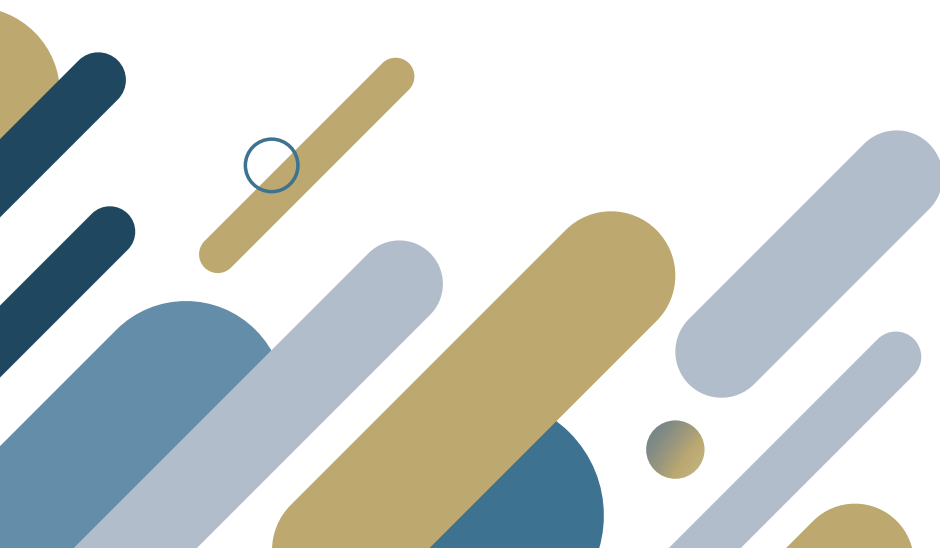


within the EDHE Community of Practice, has been focused on shifting mindsets and cultures. I have often said that we need to move from compliance to conviction. Entrepreneurship should not feel like an add-on; it must be part of our DNA.

At the heart of my approach is inclusivity. I believe in the power of co-creation where students, academics, industry, and communities collaborate to solve real problems. This is something I actively practice through my research, especially in the biomedical space, where I have drawn from indigenous plant knowledge to develop innovative healthcare solutions. This led to the founding of Global Health Biotech, a company that started in the lab but lives in the community. We have taken a plant-based anti-inflammatory ointment from concept to commercial product - proof that academic research can and should lead to tangible benefits for people.

In alignment with the ACEEU framework, I have focused on three critical areas: entrepreneurial teaching and learning, building institutional capacity, and third mission engagement. At the Durban University of Technology, I helped launch the Support Undergraduate Research Excellence (SURE) programme. Students were able to turn their assignments into start-ups and up-scaling for Research and Entrepreneurship. SURE equips students with tools to take their research into the marketplace through IP development, mentorship, and business incubation. This is how we build a generation of innovators who do not wait for opportunities but create them.

Another key lesson has been the value of interdisciplinary collaboration. Through SURE, I have brought together students from other faculties and departments such as economists, biomedical scientists, and marketing, legal and accountancy to co-design solutions.



These partnerships have not only enriched our academic outputs but also grounded them in real-world relevance.

But it is not always easy. There are institutional hurdles such as funding constraints, risk aversion, and fragmented systems. Yet, I have seen that with strong leadership, consistent advocacy, and strategic alignment, change is possible. We need more champions - people who will push the boundaries and open doors for the next generation.

My Engagement goes beyond campus walls. In rural communities, I work with traditional healers to validate and protect indigenous knowledge, ensuring our innovations honour their roots. This is not just about innovation, it is about justice, about recognising the value in all forms of knowledge.

Entrepreneurship and engagement are deeply personal for me. They are about changing lives, not just ticking boxes. In South Africa and across the continent, we face urgent challenges - youth unemployment, inequality, and health disparities. Higher education must be part of the solution.

The ACEEU accreditation offers more than a checklist, it is a compass. It helps us focus on what matters: empowering people, building sustainable systems, and fostering innovation that is both scalable and socially responsive. My experience has taught me that when we commit to this journey authentically and intentionally, we see real impact.

We produce graduates who are bold thinkers, not passive recipients of knowledge. We develop technologies that emerge from our soil and serve our people. We engage communities not as beneficiaries, but as partners. This is the future I believe in, and the future I work towards every day.

The Entrepreneurial University is not just an aspiration; it is a necessity. And as we walk this path, we must remember: our greatest innovations come from collaboration, our most powerful ideas come from lived experience, and our biggest impact comes when we serve with purpose.



Professor Keo Motaung is a trailblazing Biomedical Scientist, Full Professor, and Founder and CEO of Global Health Biotech (PTY) Ltd, with over 25 years of experience in higher education. Prof. Keolebogile Motaung currently serves as the Chair Holder of the FALF-FREF Research Chair on Entrepreneurship and Financial Inclusion at Nelson Mandela University. She is also affiliated with Stellenbosch University as a Professor and Research Associate. Her career is defined by her dedication to research, innovation, commercialisation and entrepreneurship, particularly in advancing biotechnology and empowering women in Science, Technology, Engineering, Arts, Mathematics and Innovation (STEAMI). Throughout her academic journey, she has led significant efforts in teaching, designing curricula, and mentoring students, encouraging them to become not only scientists but also entrepreneurs. In 2016, drawing from her research into medicinal plants and

Keolebogile Motaung

FALF/FREF/Nelson Mandela
University Research Chair in
Entrepreneurship and
Financial Inclusion

tissue engineering, she founded Global Health Biotech, a company focused on plant-based medicinal technologies.

One of its standout innovations is La-Africa Soother, a natural anti-inflammatory ointment for athletes and those with musculoskeletal injuries. For her ground-breaking innovation, she has received recognition from a wide spectrum of institutions because she has thrown the gauntlet in bridging the gap between science, commercialisation and entrepreneurship. Beyond her company, Professor Motaung serves as a board member of the Technology Innovation Agency, providing strategic guidance on technological innovation and commercialization.

As Chairperson of the Community of Practice for Entrepreneurship Research within the Entrepreneurship Development in Higher Education initiative,

she leads efforts across South Africa's universities to foster entrepreneurial ecosystems. Her influence extends to shaping intellectual property policies as Chairperson of the National Intellectual Property Management Office Advisory Board, ensuring equitable IP management to support commercialization. A staunch advocate for diversity in STEAMI, Professor Motaung also works to create opportunities for women in science and technology, contributing to a more inclusive research environment. Her passion for science, innovation, and commercialization, combined with her leadership in capacity building and mentorship, positions her as a transformative force in biotechnology and entrepreneurship.

NELSON MANDELA
UNIVERSITY







All Our Students Are Potential Entrepreneurs

Founded in 1990 by five friends with a shared vision, UDD was created from scratch to become a different kind of university — one driven by innovation and a deep commitment to fostering entrepreneurship across all disciplines.

By Federico Valdés

The story of Universidad del Desarrollo (UDD) is itself an entrepreneurial experience. Most universities are created by institutions and influential individuals such as the church, government branches or state leaders. We, on the other hand, are a university founded by five friends who had met under various life circumstances and had complementary affinities and skills. Jointly, we decided to embark on a project that would transcend time and positively impact our society.

It was January 1990, and while having breakfast in a café in Santiago de Chile, we outlined on a napkin the foundations of what became a life project: to create from scratch a private university. In the south of Chile, in Con-



cepción - where one of the founders had lived and worked years before in the city's main traditional university - we would build a new and innovative university dedicated to training entrepreneurs.

Just three months later, we welcomed the first 100 students to our only business administration program, operating from a rented house in the city center. We still thank those 100 families who placed their trust in us by choosing this newly born university for their children's higher education.

At that time, almost 35 years ago, "startups" were not yet being discussed, but we can confidently say that Universidad del Desarrollo followed the full journey — from an idea to a solid reality. The following year, we opened new degree programs and by the end of the third year we built our first campus. In 1999, we opened a new campus in Santiago. Then we made a strategic alliance with the main private clinic in Chile, the Clínica Alemana de





Santiago, which enabled us to launch healthcare programs, including medicine, among others.

And so, 35 years after that early breakfast in the café, Universidad del Desarrollo has more than 18,000 students, almost 45,000 alumni, and a well-earned reputation as an entrepreneurial and innovative university.

That's why entrepreneurship has always been in our DNA, and from the beginning, our goal was to ensure entrepreneurship was not limited to programs like business administration or engineering. Our aim was to transmit the entrepreneurial spirit as a cross-cutting hallmark of the university to students of all disciplines. It took time, but today, our startup founders come from diverse fields such as design, nutrition, and nursing, alongside the more traditional business disciplines.

In our journey from a nascent university to what we are today, I would highlight three key aspects that have been fundamental in instilling the entrepreneurial spirit in our students:

1. Breathing Entrepreneurial Air: From day one, we wanted our students to study at a university that recognizes, values, rewards, and encourages the entrepreneurial and innovative spirit. This culture is evident in the constant invitation to the most important Chilean entrepreneurs to give talks, transmitting to our students their passion and their practical experience. We are convinced that it is they who change the world and impact people's lives. From our early years, we also began to annually award the "Entrepreneurial Spirit" prize to the most relevant Chilean entrepreneurs. We also decided to seek strategic partnerships with internationally renowned institutions in education in this field. For instance, we established joint initiatives with Babson College and the Stanford Technology Ventures Program. At Universidad del Desarrollo, the entrepreneurial spirit is felt in all environments.



2. Entrepreneurship Courses and Programs for Everyone: Our vision has always been that the entrepreneurial DNA is present in all our students, regardless of their field of study, and that in today's world, a medical doctor, a lawyer, a dentist, and an architect are all potential entrepreneurs. That's why we developed a wide range of entrepreneurship courses, which are now mandatory for students across all disciplines. Thus, entrepreneurship education is a cross-cutting subject at our university. And beyond the mandatory course, all those interested in the topic can continue to advance in these subjects. Entrepreneurship education has universal positive value. When we talk about the skills required for the 21st century, we are talking specifically about leadership, teamwork, critical thinking, flexibility, adaptability, and collaboration. That's what our students learn in our first entrepreneurship course.

In 2023 alone, over 6,000 students from all programs completed these courses.

3. A Real Ecosystem: Building on that foundation, over the years we have created an ecosystem to support our entrepreneurial students, which the alumni community has also joined. This includes an Entrepreneurship Academy, startup incubation programs, and acceleration programs through UDD Ventures, one of the most recognized accelerators in our country. Support continues with a network of mentors, access to co-working infrastructure, and financing through partnerships with companies and venture capital investors. We have just launched a new community, the "UDD Founders," which specifically brings together all our alumni who have founded a startup.



Looking back now as one of the founders and President of the university for 13 years, the truth is that the dream we had 35 years ago of creating a university from scratch, one that carried the entrepreneurial spirit at its heart, has far exceeded what we imagined at that time. Now we have a new dream: that our entrepreneurial students and alumni are truly capable of changing the world and leading Chilean society towards development and prosperity. That is what we have dedicated ourselves to in recent years, with body and soul, from this now consolidated UDD — eager to keep innovating, impacting, and dreaming big.

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Now we have a new dream: that our entrepreneurial students and alumni are truly capable of changing the world and leading Chilean society towards development and prosperity.





Federico Valdés

President



Universidad del Desarrollo

Federico Valdés is co-founder and current President of Universidad del Desarrollo (UDD), one of Chile's leading private universities. He has been a member of UDD's Board of Directors since its foundation and has served as President since 2011. Previously, he held the positions of Executive Vice President and Provost.

With over 30 years of academic experience, he has taught at the Schools of Business, Law, and Journalism in both Santiago and Concepción, earning multiple distinctions as an outstanding professor.

Beyond academia, between 2007 and 2012, he was the president of the Universidad de Chile professional Football Club. Under

his leadership, the club won three National Tournaments and the Copa Sudamericana.

From 2007 to 2012. Internationally, he has been a member of the Advisory Board of the Stanford MSx master's program for four consecutive terms. Since 2020, he has been part of the National Higher Education Access Committee, which defines the admission processes and tools for Chile's university system. He also served as Director of Santiago 2023, the organizing body of the Pan American and Parapan American Games.

Federico Valdés holds a degree in Industrial Engineering from Universidad de Chile and a Master of Science in Management from Stanford University.

A Model for Entrepreneurial Universities in South Africa

After 30 years of government-supported democracy, entrepreneurship, identified as a catalyst for change, has failed to reduce poverty, unemployment, and inequality as envisioned in SA

By Ricardo Peters

In the South African entrepreneurial eco-system, Higher education institutions (HEIs) play a crucial role in offering entrepreneurship education and training in order to, in part, address the social ills facing the country, including poverty, unemployment and inequality. To date, it could be argued, HEIs have not done enough. Culture, leadership, support, resources, and curriculum rigidity contribute to this lack of progress. Universities must foster more entrepreneurs

and innovators. This article presents a conceptual framework with recommendations that contextualise the entrepreneurship education ecosystem.

Entrepreneurship is a learnable skill (Peters and Nicker, 2013), and higher education institutions should actively facilitate this learning to enhance entrepreneurship education and entrepreneurial learning among students.



Entrepreneurship should be ingrained in their core values and operations and go beyond surface-level policies and programmes. Resources also need to be allocated to these initiatives, as it makes the process tougher without the requisite resources. Pedagogy must also be addressed to bring about the desired outcomes. In addition to academic work, a strong focus must be placed on the soft skills required to bring about the values, attitudes and change that usher in the entrepreneurial culture, orientation and requisite skills that address the social narrative.

An entrepreneurial mindset is a set of skills, attitudes and traits essential for starting and running a successful business (entrepreneurial or intrapreneurial). It involves identifying opportunities, taking calculated risks and thinking creatively to solve problems. Programmes like hackathons, business plan competitions and collaborative projects with industry partners also play a significant role in experiential learning. These initiatives encourage students to develop innovative solutions to real-world problems, fostering a spirit of creativity and entrepreneurship. For example, the annual entrepreneurship competitions at many South African universities have led to the creation of successful startups that address local and global challenges (Maaravi et al., 2021).

Higher education is confronting unparalleled challenges regarding its purpose, role, organisation, and scope within society and the economy. A central question in higher education discussions is whether HEIs should function as entrepreneurial entities. The concept of the entrepreneurial university (EU) was first articulated by Etzkowitz (1983) to delineate the divide between scientific

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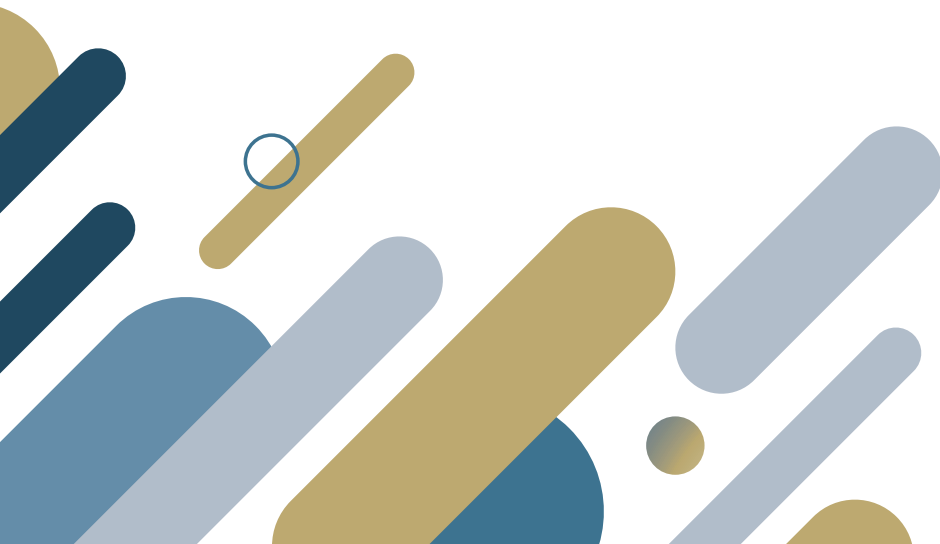
HEIs cannot successfully integrate entrepreneurship and cultivate an entrepreneurial culture without a clear intention expressed in their strategic documents, backed by senior management and driven by strong entrepreneurial advocates.



research and commercial enterprise. Etzkowitz (1998) characterised the shift in perception of the university by businesses, viewing it as a contributor to production and profit rather than solely as a provider of training and education, as a second revolution in academia. Subsequent advancements in the conceptualisation of the EU are ascribed to Clark (1998). Clark perceived the EU as a mechanism to address disparities between the external environment and the university. The EU is regarded as an inherent incubator, offering support frameworks for educators and students to launch new enterprises (Etzkowitz, 2003).

This indicates that HEIs must adopt an entrepreneurial culture that fosters innovation, facilitates the commercialisation of research, and employs a pragmatic approach to addressing societal challenges (Klofsten et al., 2019). Unfortunately, implementing this cultural

transformation has been challenging, primarily because many HEIs in South Africa focus on producing job seekers rather than job creators, and continue to offer programs that do not result in employment in students' specific fields. Moreover, in numerous cases, HEIs are governed by individuals who lack a comprehensive understanding of the intricacies of entrepreneurship and innovation. These individuals perceive entrepreneurship as a pursuit of self-interest and wealth accumulation, rather than a mindset that cultivates innovative solutions to societal issues. To effectively cultivate an entrepreneurial culture and acumen, HEIs must adopt an entrepreneurial approach rather than remain bureaucratic entities that merely pay lip service to the concept. Entrepreneurship must be embedded in their fundamental values and operations, transcending superficial policies and programs.



The Organisation for Economic Co-operation and Development (OECD) provides a guiding framework for the European Union. The OECD framework is a widely recognised model for examining a university's entrepreneurial inclination. The structured framework targets universities seeking guidance, concepts, and motivation for the efficient administration of institutional change (OECD, 2012). The framework is intended to assist universities in evaluating their performance based on criteria categorised into seven domains: leadership and governance, organisational capacity, human resources and incentives, entrepreneurship development in pedagogy, pathways for entrepreneurs, university-business collaboration for knowledge transfer, the entrepreneurial university as a global institution, and the assessment of the entrepreneurial university's impact.

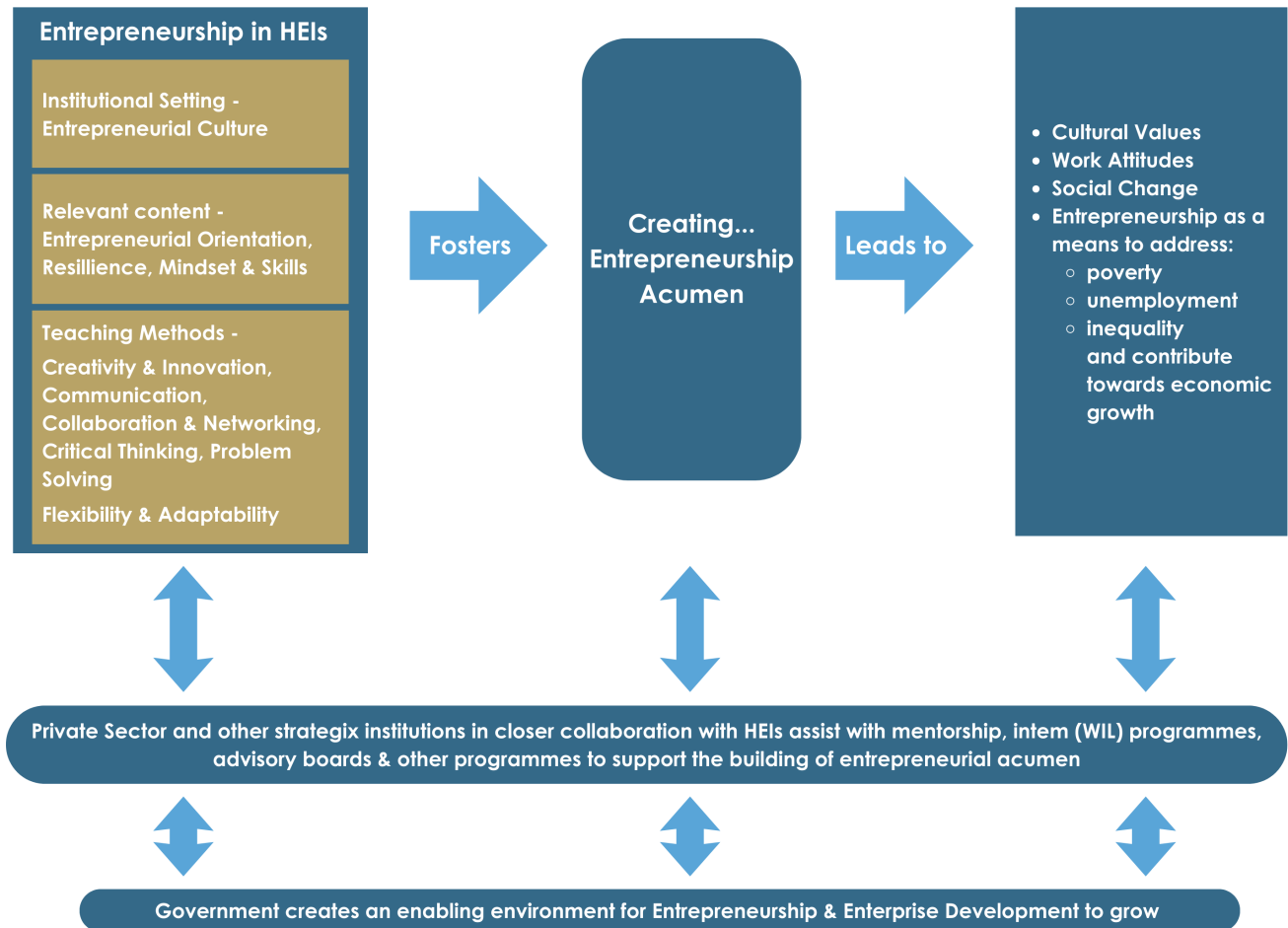
The framework serves as a self-assessment instrument to assist universities in recognising their present circumstances and areas for improvement (OECD, 2012). In Figure 1, a model is proposed for developing nations such as South Africa.

Figure 1 illustrates a conceptual framework indicating that cultivating an entrepreneurial culture, orientation, behaviour, and acumen, supported by the leadership of HEIs, resources, and a suitable curriculum, can improve entrepreneurial success among students, thereby augmenting their entrepreneurial engagement and aiding in the resolution of social issues. It illustrates that HEIs aiming to implement this essential transformation and improve their future significance must embrace a more entrepreneurial and innovative strategy. This

addresses the issue of suitably qualified individuals in leadership positions who can foster and promote the desired entrepreneurial agenda at HEIs.

The author's experience suggests that HEIs cannot successfully integrate entrepreneurship and cultivate an entrepreneurial culture without a clear intention outlined in their strategic documents, endorsed by senior management - including the vice chancellor and deputy vice chancellors, and driven by strong entrepreneurial advocates. The HEI must exhibit flexibility and agility by appointing entrepreneurial scholars who can integrate relevant content and pedagogical methods while consistently fostering entrepreneurial values and culture. Strong relationships with strategic partners and stakeholders, including businesses and alumni within the enterprise ecosystem, are crucial for success. Pedagogy must be considered to attain the desired outcomes. In addition to academic endeavours, considerable attention must be directed towards the soft skills and mindset required to promote the values, attitudes, behaviours, and, ultimately, social change that nurtures an entrepreneurial culture, orientation, and essential skills that address the social narrative.

HEIs cannot successfully integrate entrepreneurship and cultivate an entrepreneurial culture without a clear intention expressed in their strategic documents, backed by senior management and driven by strong entrepreneurial advocates. HEIs must exhibit flexibility and agility by appointing entrepreneurial academics who can integrate relevant content and pedagogical methods while consistently fostering entrepreneurial values and culture. Strong relationships with strategic



partners and stakeholders, including businesses and alumni within the enterprise ecosystem, are critical for success. Pedagogy must be taken into account to attain the desired outcomes. In addition to academic endeavours, considerable attention must be directed towards the soft skills and mindset required to promote the values, attitudes, behaviours, and, ultimately, social change that nurtures an entrepreneurial culture, orientation, and essential skills that address the social narrative.

Recommendations

Higher Education Institutions must establish stronger alliances with government, corporate entities, and other essential stakeholders to enhance collaboration among partners, as delineated in the quadruple helix model.

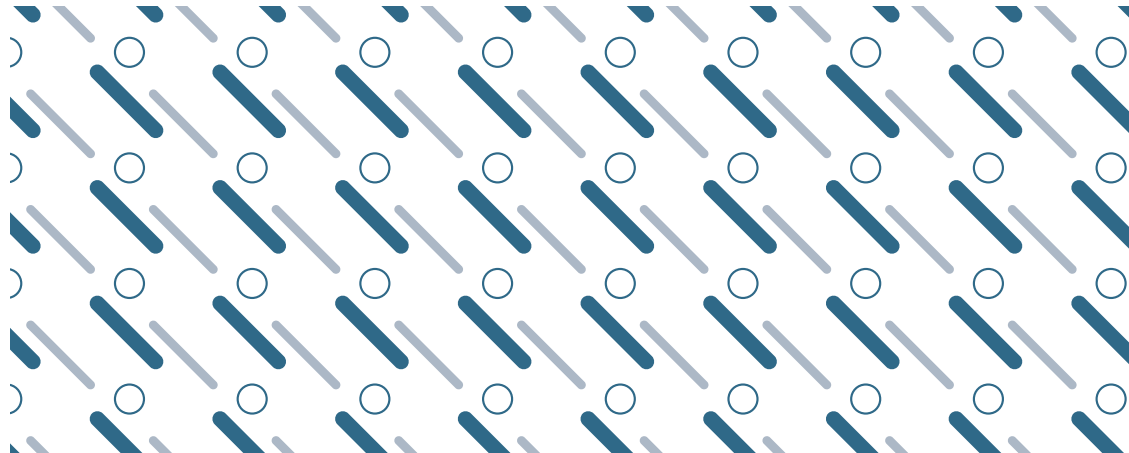
Efforts must be augmented to cultivate entrepreneurial graduates who can adapt to a dynamic environ-

ment. This necessitates that higher education institutions prioritise entrepreneurship education as a primary focus area.

There is a necessity to devise innovative pedagogical methods to augment students' competencies, including problem-based learning, experiential learning, industrial attachments, mentorships, and training.

Effective pedagogical strategies and pertinent learning methodologies must be implemented to guarantee the success of entrepreneurial education programs.

Efforts must be undertaken to guarantee that all academics specialising in entrepreneurship are adequately trained (entrepreneurial themselves) and sufficiently motivated, as the overall success of the program relies on their contributions.





**SOL PLAATJE
UNIVERSITY**



Ricardo Peters

Acting Director, Centre for
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Dr Peters was born in Cape Town. He holds a Doctorate in Leadership Performance and Change from the University of Johannesburg, a Master's in Business Leadership (MBL) from UNISA School of Business Leadership and a Bachelor's of Commerce (B. Com) from the University of the Western Cape. He has lectured on Finance, Investments, Financial Planning, Derivatives, Strategic Management, Entrepreneurship & Innovation at under- and postgraduate levels.

Dr Peters has gained extensive experience in the private sector and academia. In 2019, he completed his term as Director of the School of Business and Finance (SBF) at the University of the Western Cape, after 10 years in the position. Dr Peters has served on various committees and boards. He has a finance background and over the years has transitioned into entrepreneurial and management studies.

Entrepreneurial Education at La Salle University

A Skills Development Model

Innovative entrepreneurial education: Fostering skills development through differentiated teaching and learning.

By Cledes Antonio Casagrande, Ingridi Vargas Bortolaso & Pedro Faccio De Conto

In 2023, La Salle University launched its Entrepreneurial Education program across its undergraduate courses. This program promotes experiential learning, placing students at its core. The goal is not simply knowledge transfer, but the development of essential life skills. Entrepreneurial education is key to this process. It fosters the entrepreneurial skills and mindsets vital for active citizenship. Our program goes beyond business creation. It equips students with critical thinking, complex problem-solving, and innovation skills applicable to diverse professional and personal settings. This pedagogical approach cultivates students' ability to proactively navigate challenges in a constantly evolving world.

La Salle's program employs a unique, hands-on methodology. Students are immersed in real-world entre-

preneurial experiences. They collaborate in multidisciplinary teams to address contemporary issues, interact with industry mentors, and develop innovative solutions. The program culminates in a final pitch presentation to a panel of expert judges. This dynamic learning environment fosters not only entrepreneurial skills but also essential soft skills like communication, collaboration, and critical thinking. It empowers students to become proactive and innovative problem-solvers ready to contribute meaningfully to society.

La Salle University-Brazil presents its Entrepreneurial Education Program – EduEmprèn Ensino Superior, freely inspired by the eponymous project conducted by the Universitat Ramon Llull in Barcelona. This semester-long program, designed for all undergraduate students across diverse fields and academic levels, immerses



students in a dynamic learning process that simulates the real world of business and innovation-focused entrepreneurship. It serves as a vehicle for applying the stages of entrepreneurial education, encompassing reflection, experience, and action, thereby fostering essential life skills and shaping students into conscious and active citizens.

The student journey begins with strategic team formation. Students from diverse backgrounds—different courses, ages, genders, and academic levels—are grouped together (8-12 individuals per team). To ensure effective collaboration within these diverse teams, the program integrates team-building sessions led by psychologists. These sessions utilize interactive activities and exercises designed to promote communication, trust, and collaboration within the teams. This heterogeneity mirrors the complexity of professional environments, where working effectively with individuals from diverse fields and perspectives is essential.

Once communication and adaptation are established, a strong sense of team identity emerges, with students creating symbols, mascots, and logos that represent their shared purpose. Building on this foundation, students are introduced to a new macro-trend that serves as the guiding theme for the semester. This macro-trend refers to a large-scale, long-term societal shift, such as the inversion of the age pyramid, the rise of single-person households, or climate change. It provides a framework

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By empowering students to become active learners and problem-solvers, La Salle's Entrepreneurial Education Program serves as an exemplar for other institutions seeking to integrate entrepreneurial principles into their curricula.







for identifying real-world problems and developing innovative solutions. Guided by Design Thinking methodology, which encourages empathy, creativity, and rapid prototyping, students are tasked with identifying a compelling problem or opportunity within the market. This step requires rigorous research and analysis, ensuring that their chosen focus is grounded in concrete data and factual evidence. Then, using a variety of frameworks and entrepreneurial tools, students are encouraged to think sustainably and propose original solutions that are both technologically and economically viable. This phase not only fosters creativity and innovation but also promotes critical and analytical thinking, along with problem-solving skills. It empowers students to analyse different aspects and variables of complex problems before proposing feasible solutions. Furthermore, interaction with experienced professionals provides practical learning and networking opportunities. Each semester, 4-5 external mentors offer valuable insights and access to their networks. This fosters adaptability and develops communication skills essential for defending proposals.

To further enhance the real-world experience, the program incorporates a "Demo Night," where students witness how successful startups operate.





This event features presentations from 3-4 prominent startups, including award-winning ventures, who deliver their pitches to the class. This provides students with a valuable opportunity to observe effective pitching techniques and gain insights into the challenges and triumphs of entrepreneurship. Following the presentations, a lively Q&A session allows for extended interaction between students and the entrepreneurs. Students can seek advice on their own projects, gain valuable feedback, and forge connections with established professionals in the field.

The program culminates with a 5-minute sales pitch to a panel of judges, simulating a real business launch.

The program has demonstrated significant impact:

- Student engagement: 178 students have participated, with enrolment projected to reach 200 for 2024/2.
- Multidisciplinary reach: The program engages students from various undergraduate courses and disciplines across all on-campus programs.
- High satisfaction: A survey revealed a high satisfaction rate (9.1 out of 10).
- Innovative solutions: 34 innovative products/services were pitched.
- Mentorship: 13 mentors provided over 50 hours of guidance, and nine startups participated in "Demo Nights."

La Salle University's Entrepreneurial Education Program demonstrates a successful model for fostering key competencies in undergraduate students. By integrating experiential learning with real-world challenges,



guided by relevant macro-trends, the program cultivates essential skills for navigating the complexities of the 21st century. Through multidisciplinary teamwork and psychologist-led team-building activities, students develop communication, collaboration, and critical thinking skills. The program's emphasis on data-driven problem identification and innovative solution development, coupled with mentorship from experienced professionals and "Demo Nights" featuring prominent startups, nurtures creativity, analytical thinking, and a proactive mindset.

The program's impact is evident in its high student satisfaction rates, the innovative solutions generated, and the positive feedback from mentors and judges. By empowering students to become active learners and problem-solvers, La Salle's Entrepreneurial Education Program serves as an exemplar for other institutions seeking to integrate entrepreneurial principles into their curricula. This approach not only equips students with valuable skills for the professional world but also fosters a mindset that encourages them to become engaged and contributing members of society.



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Researcher of
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Education



Holds degrees in Philosophy (2003) and Pedagogy (2023) from Universidade La Salle (Brazil), and a Master's in Science Education from the Universidade Regional do Noroeste do Estado do Rio Grande do Sul (UNIJUÍ - 2008). He received his Doctorate in Education from the Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS - 2012). Currently, he serves as the Rector of Universidade La Salle (Brazil). He is a permanent faculty member in the Graduate Program in Education, and a professor in the undergraduate teaching programs at the same institution. He leads the Lassalist Thematic Research Group (CNPQ).



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Pedro Faccio
De Conto

Professor and Academic
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Empowering Inclusive Innovation

Building AI-Enabled Entrepreneurial Ecosystems in Conservative Higher Education Contexts

Two recent conceptual studies, both set in the Nigerian context, highlight the intersection of AI, entrepreneurship, and cultural influence, demonstrating how institutional vision, technological capacity, and social values shape entrepreneurial aspirations.

By Helen Afang Andow & Mohammed Gaddafi Ibrahim

In a rapidly transforming global economy, higher education institutions (HEIs) are increasingly called upon to serve not only as centres of knowledge but as engines of entrepreneurship, digital transformation, and social inclusion. As artificial intelligence (AI) redefines how societies learn, work, and innovate, universities are uniquely positioned to foster the skills, ecosystems,

and mindsets needed to prepare students—and societies—for a rapidly evolving future.

Two recent conceptual studies, both set in the Nigerian context, highlight the intersection of AI, entrepreneurship, and cultural influence, demonstrating how institutional vision, technological capacity, and social



values shape entrepreneurial aspirations. One study presents a framework for developing AI-enabled entrepreneurial ecosystems within HEIs, while the other examines how cultural attitudes and perceived feasibility affect the entrepreneurial intentions of women in Northern Nigeria. When taken together, they illustrate the pressing need for culturally responsive, digitally integrated strategies that empower inclusive innovation in higher education.

AI as a Catalyst for Entrepreneurial Transformation in HEIs

Artificial intelligence is rapidly reshaping higher education. From personalized learning pathways to predictive analytics, AI tools are transforming how institutions operate, how students engage with content, and how research and innovation are conducted. Yet, while global universities explore AI to enhance their missions, many HEIs in developing countries—such as those in Nigeria—face fragmented efforts, weak infrastructure, and limited strategic integration.

In response, one study introduces the AI-Entrepreneurial Ecosystem Engagement and Impact Model (AIEE-IM), a five-pillar conceptual framework for building inclusive and sustainable AI-enabled entrepreneurial ecosystems in higher education.

For higher education institutions to effectively foster AI-enabled entrepreneurial ecosystems, they must begin with a strategic vision and institutional alignment that integrates AI and entrepreneurship into their core missions. This involves establishing dedicated innova-

tion centres, embedding AI competencies across academic programs, and articulating clear objectives that reflect both economic and societal priorities. Crucially, interdisciplinary collaboration plays a vital role, as innovation thrives when ideas flow across disciplinary boundaries. Encouraging cooperation among faculties, such as engineering, business, the social sciences, and humanities, can lead to more creative and comprehensive solutions to complex problems.

To support these efforts, infrastructure and resource mobilisation are essential. HEIs must ensure access to robust digital infrastructure, cutting-edge AI tools, and sustainable funding mechanisms. Strategic partnerships with technology firms, public agencies, and investment networks can facilitate resource acquisition and ecosystem growth. Equally important is stakeholder engagement and inclusion; involving students, faculty, alumni, industry partners, and policymakers helps ensure that innovation ecosystems are grounded in diverse needs and perspectives. This approach must be attentive to digital equity, particularly in reaching underrepresented or marginalized groups.

Finally, impact measurement and continuous learning must be integral to the process. Institutions need to implement systems for tracking performance, gathering feedback, and adapting strategies over time. This ensures responsiveness to evolving technological landscapes and societal demands, while fostering a culture of evidence-based improvement and long-term sustainability.





When entrepreneurship aligns with culturally acceptable roles, such as home-based businesses, 150 women-only markets, or faith-compatible enterprises, it becomes a more acceptable and even desirable pathway.

The AIEEIM model reflects a growing global recognition that higher education must evolve to support entrepreneurial thinking and digital readiness—especially in regions facing systemic challenges such as infrastructure gaps, brain drain, or skill mismatches. However, as the second study shows, innovation cannot be achieved without understanding—and working within—the cultural realities that shape people's behaviour and choices.

Culture, Gender, and Feasibility: The Case of Northern Nigerian Women

While AI can support innovation at scale, social norms and perceptions determine who gets to participate in that innovation. A second study, grounded in Shapero's Entrepreneurial Event (SEE) Theory, explores the factors that influence entrepreneurial intentions among women in Northern Nigeria, a region where conservative gender norms, religious influence, and economic barriers often restrict women's participation in public and economic life.

The study finds that cultural behavioural attitudes strongly influence the perceived desirability of entrepreneurship. In societies where women's roles are defined primarily by domestic responsibilities, entrepreneurship, especially in its public or market-facing forms, is often viewed as inappropriate or even threatening. This internalized perception suppresses entrepreneurial intentions, limiting economic participation and self-determination.

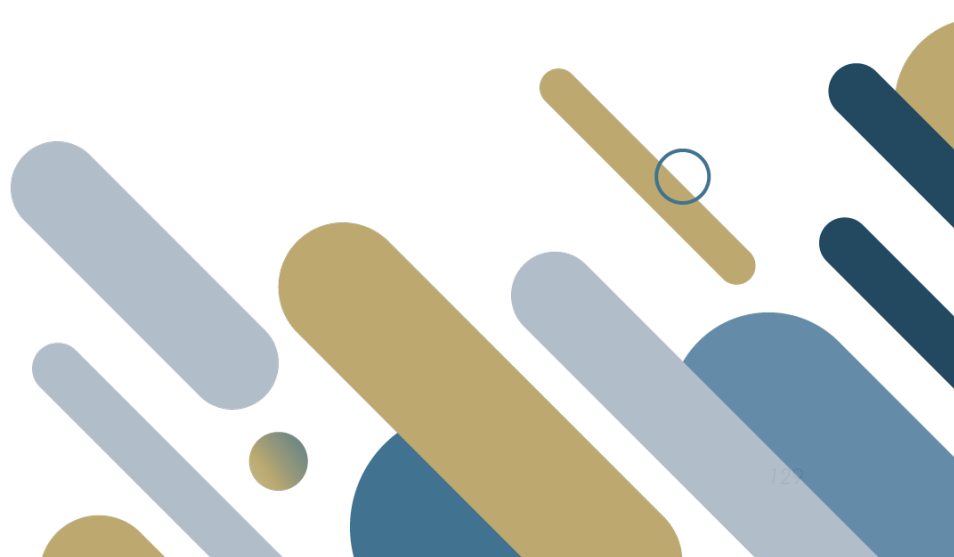
However, when entrepreneurship aligns with culturally acceptable roles, such as home-based businesses,

women-only markets, or faith-compatible enterprises, it becomes a more acceptable and even desirable pathway. This reflects SEE Theory's core claim that perceived desirability is shaped by social and cultural values.

More critically, the study highlights perceived feasibility, a woman's belief in her own capacity to become an entrepreneur, as a powerful moderator. Women who had access to vocational education, digital tools, microfinance, and supportive family structures were more likely to develop entrepreneurial intentions, even in the face of cultural resistance. Perceived feasibility helps women adapt, negotiate, and creatively navigate restrictive norms, turning potential barriers into entry points for innovation.

For example, some women expressed a willingness to start online businesses or informal trade under the supervision of male relatives. While not fully liberating, such compromises allow women to pursue economic autonomy within their cultural constraints, an important step toward broader gender equality.

The study confirms that displacement and resilience are significant drivers of innovation, particularly in contexts where women face entrenched cultural barriers. Displacement events—such as job loss, economic shocks, or the death of a primary earner, often act as powerful catalysts for entrepreneurial activity. Faced with urgent financial need, many women are compelled to consider entrepreneurship, even when it challenges prevailing social norms. In such cases, cultural resistance frequently gives way to the immediate necessity of income generation. However, the effectiveness of these entrepreneurial efforts depends heavily on whether women perceive their goals as feasible. Those with access to even basic resources, such as vocational training, digital tools, or family support, were far more likely to act on their intentions.



Still, necessity alone cannot sustain long-term entrepreneurial success. Without the right skills, supportive networks, and enabling environments, many of these ventures remain vulnerable or short-lived. This highlights the importance of institutional interventions that go beyond emergency responses, focusing instead on systemic solutions such as education, mentorship, infrastructure development, and inclusive policy frameworks.

In this broader context, higher education institutions have a unique role in bridging the gap between digital transformation and social impact. They are ideally positioned to connect global innovation trends with local needs, acting as both drivers and facilitators of inclusive entrepreneurial ecosystems. To fulfil this role, HEIs must embrace several critical strategies.

First, entrepreneurship education must be culturally responsive. Curricula should acknowledge local traditions and social constraints while equipping students with practical tools for navigating them. For example, faith-aligned, home-based, or community-supported business models can be integrated into teaching and mentoring activities. In parallel, digital access and feasibility must be improved, especially in rural and underserved regions. Collaborative efforts between universities and governments should focus on expanding access to mobile technologies, vocational training programs, and microfinance. Women, in particular, need targeted support to build both the confidence and capacity to pursue entrepreneurial goals.

Equally important is the role of mentorship and representation. Female entrepreneurs who have successfully navigated societal expectations can serve as mentors, offering both inspiration and actionable guidance to others. Moreover, innovation centres within universities must be designed to be inclusive. AI hubs, incubators, and entrepreneurial labs should actively involve women, students from marginalised communities, and learners from non-business disciplines to ensure a broader distribution of opportunity.

Finally, policy and institutional support must align with these goals. Governments should introduce gender-sensitive funding mechanisms, incentives for cross-sector collaboration, and investments in the digital and educational infrastructure required to sustain inclusive innovation. HEIs, in turn, must commit to continuous evaluation and adaptation, using gender-disaggregated data and qualitative feedback to refine their programs and extend their reach. In doing so, they can ensure that their contributions to entrepreneurship are not only effective but equitable and sustainable.



Conclusion: Toward Inclusive Innovation in the Digital Age

In the context of global digital transformation, innovation must not be viewed solely through the lens of technology. Rather, it must include a deep understanding of cultural, gender, and social dynamics. Higher education has a critical role to play, not only in producing technological tools but in shaping inclusive, ethical, and context-sensitive ways of applying them.

The studies from Nigeria serve as a powerful reminder that entrepreneurial ecosystems must be both tech-enabled and culturally embedded. When AI integration is guided by strategic vision and supported by inclusive policy, and when entrepreneurship is reimagined within cultural frameworks, HEIs can become true engines of social and economic transformation.

By empowering women, engaging communities, and leveraging AI as both a tool and a strategy, universities can create ecosystems where innovation is not just possible, but inclusive, adaptive, and resilient.



Helen Afang Andow

Deputy Vice Chancellor Strategy,
Innovation & Service Delivery



Prof. Helen Afang Andow is a seasoned academic and scholar in the field of Business Administration and Entrepreneurship. She currently serves as a Professor in the Department of Business Administration & Entrepreneurship, Faculty of Management Sciences, at the College of Communication, Management & Social Sciences, Kaduna State University, Nigeria. Presently, She is the Deputy Vice Chancellor Strategy, Innovation & Service Delivery Kaduna State University, Nigeria. With over two decades of teaching, research, and administrative experience in higher education, Prof. Andow has made significant contributions to entrepreneurship development, strategic management, and organizational leadership. Her research focuses on sustainable business practices, innovation in small and medium enterprises (SMEs), and the role of entrepreneurship in economic development, particularly within emerging economies.

For her academic versatility, she is a certified trainer for Doctoral supervision from Stellenbosch University (African Doctoral Academy), South Africa, A Certified E-Learning expert by Louisiana State University, USA, ICT expert on Media & Intercultural Communication in a Digital Age by RUDN University, Russia and a Train the Trainer on Entrepreneurship by Lagos Business School; External Examiner to various universities (Federal University of Technology, Minna; Nile University; Adamawa State University; Nasarawa State University; Nigerian Defence Academy; Federal University Dutsinma; Babcock University; Ahmadu Bello University ABU); Resource person for MBA Residency Programme SMC University; Board of examiner and supervision at National Open University of Nigeria (NOUN); a Certified Business Development Service Provider (BDSP) trained by Growbridge Advisors, London, UK and SMEDAN; a Certified TOTFC on MSMEs; Member, Kaduna State Women Mediation Network and a member of National University Commission (NUC) Accreditation team.

Mohammed Gaddafi Ibrahim

Head of the Department of Entrepreneurial Studies



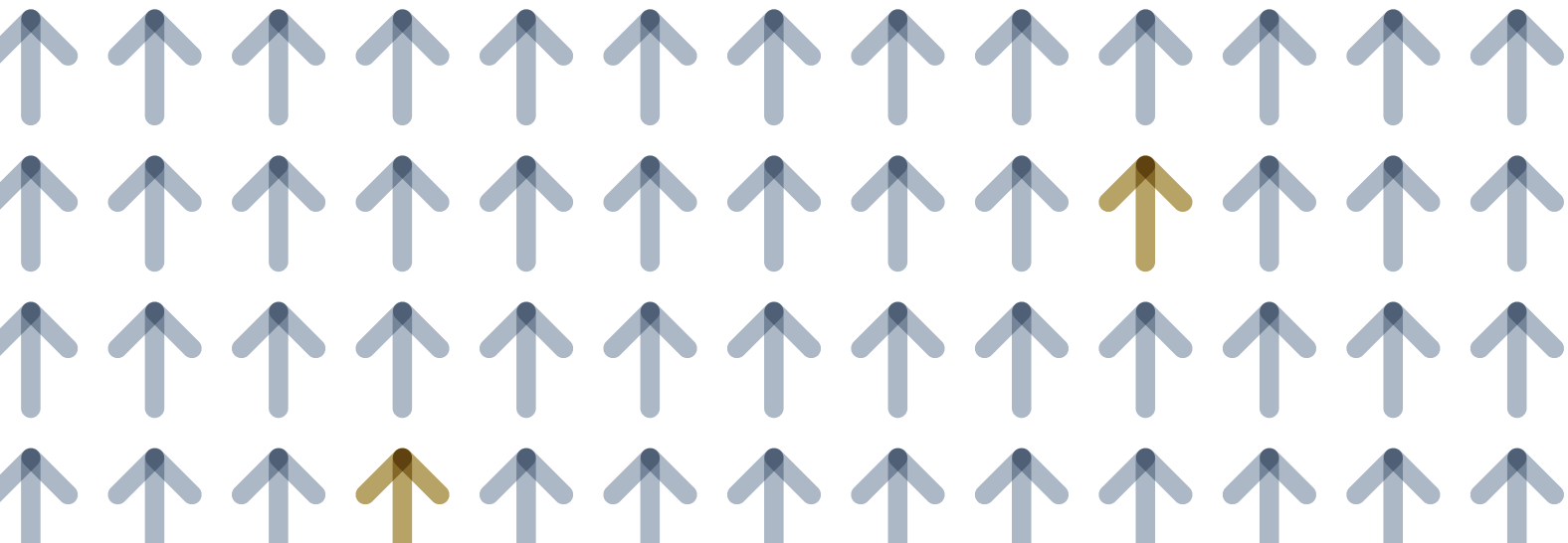
Dr. Mohammed Gaddafi Ibrahim is an accomplished academic and expert in Entrepreneurship and Management. He is currently the Head of the Department of Entrepreneurial Studies at the National Open University of Nigeria (NOUN), where he leads initiatives in academic innovation, research, and curriculum development. Dr. Ibrahim holds a Doctorate in Management from INTI International University, Malaysia, and has a robust multidisciplinary academic background, including a B.A. in Business Administration from the University of Hertfordshire and an M.Sc. in Management Information Systems from Coventry University, UK. He also holds postgraduate diplomas in Education and Accounting.

Dr. Ibrahim is a Fellow of the Association of Management and Social Sciences Researchers of Nigeria and the Certified Chartered System Accountants (USA). He is also a member of ANAN, the Association of Certified System Accountants (USA), and the Open Distance and E-Learning Association of Nigeria. His scholarly work focuses on Corporate Social Responsibility and entrepreneurship development in Nigeria. He has received research grants and has published extensively in reputable journals. In recognition of his academic impact, he was honored with the "Contribution to the Academic Community Award" by the University of Hertfordshire. Dr. Ibrahim continues to champion entrepreneurship education and research in Africa.

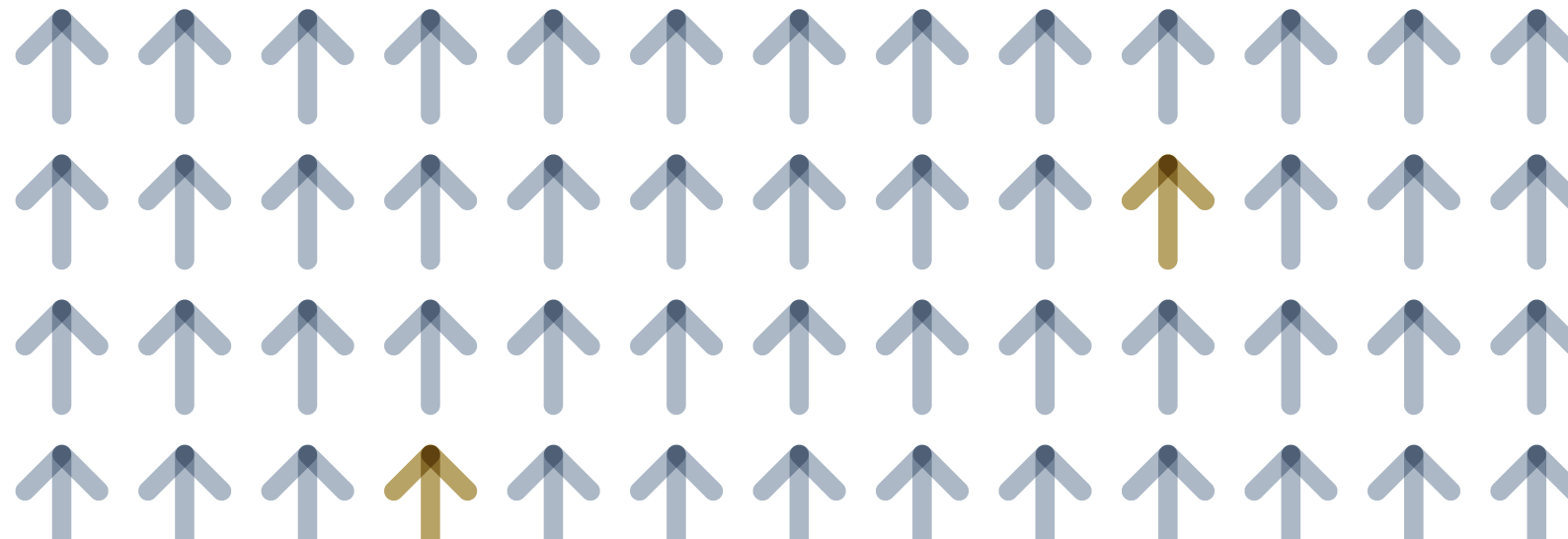


Higher Education

ENGAGE MENT



Section 3



Whanaungatanga in Practice

Building a Māori Innovation Community

From outreach to whanaungatanga: building a Māori innovation community through partnership-led entrepreneurship education.

By Darsel Keane and Te Maruata Maxwell

Entrepreneurship education is evolving and can no longer rely on generic, one-size-fits-all approaches. The future lies in models that are relational, community-led, and grounded in diverse identities, values, and aspirations.

Aotearoa, New Zealand's startup ecosystem, continues to grow, yet Māori remain underrepresented in entrepreneurial activities and investment pipelines (Tapuwae Roa, 2024). Building a strong pipeline of Māori innovators is essential. Not just for equity, but for a resilient national innovation ecosystem. Embedding Māori

leadership and perspectives in entrepreneurship education is a critical step towards this goal.

At Waipapa Taumata Rau, University of Auckland, the Centre for Innovation and Entrepreneurship's (CIE) vision is to develop innovative and entrepreneurial mindsets and capabilities in students and staff, equipping them to contribute to a future of economic, social, and environmental prosperity for Aotearoa and the world. Realising this vision requires reflecting the diversity within our institution, embedding and contextualising entrepreneurship education in ways that

resonate with Māori and Pacific communities, women, diverse academic disciplines, and across the full academic journey.

This chapter shares how indigenous-led, relational approaches have shaped CIE's entrepreneurship education practice, providing practical insights for institutions seeking to engage diverse university communities in meaningful, culturally responsive ways.

Building Relationships, Not Just Programmes

As a tauiwi-led team, CIE acknowledges the importance of allyship in supporting Māori entrepreneurship. This mahi (work) requires navigating the tension between a genuine desire to help and the responsibility not to impose. For tauiwi, allyship means seeking trusted Māori advisors, creating space for Māori leadership, and being willing to learn with humility. It involves

being vulnerable, acknowledging what we do not know, and consistently showing up to earn trust.

Our approach resonates with the concept of allyship as Transformative Entrepreneurial Ecosystem Support (TEES), defined as the ongoing, authentic actions of ecosystem actors who support entrepreneurs who are relatively disadvantaged or excluded from the entrepreneurial ecosystem, thereby catalysing systemic change towards greater inclusion and equity (de Bruin & Woods, 2025). For CIE, allyship is not a role we assume; it is a relationship we build, grounded in reciprocity, respect, and a long-term commitment to partnership.

Rather than delivering entrepreneurship as a standardised service, CIE prioritises building authentic, reciprocal relationships. We recognise that innovation capability flourishes when it is co-created with the



people it seeks to serve. Our journey began by recognising a critical gap: CIE lacked the cultural insight needed to meaningfully engage with Māori students and staff. To address this, we invited a senior Māori leader to join CIE's internal advisory board through the Pro Vice-Chancellor Māori's office. This relationship provided essential mentorship and feedback, guiding us on how to foster a Māori innovation community within the university.

Recognising the need for deeper cultural capability, we created a Māori Connector role to strengthen relationships with Māori students and staff. This role serves as a whanaungatanga-based bridge, fostering trust and belonging by embedding CIE within existing Māori networks. Rather than expecting students to seek us out, the Connector ensures our mahi aligns with the aspirations and realities of our Māori community. This relational approach reinforces collaboration across the university and keeps our work grounded in community-led engagement.

Global Indigenous entrepreneurship literature emphasises the importance of contextual, culturally grounded relationships (Hindle & Lansdowne, 2005; Kapa et al., 2017).

Growing a Māori Innovation Community

The relational groundwork laid through advisory partnerships and dedicated roles has enabled several co-created initiatives. A pivotal example was supporting Māori student leaders to participate in a Silicon Valley tour. Inspired by this experience, one student

conceived Kurutao, a Māori Entrepreneurial Leaders Study Tour within Aotearoa. Gifted its name by Whare Tū Tauā expert Michael Steedman, Kurutao symbolises agility, strength, and purpose. The name embodies the leadership, resilience, and vision this programme fosters.

Previously, CIE had successfully delivered Whiua ki te Ao, an annual Māori innovation speaker event. However, recognising that one-off events could not sustain a growing community, we launched a monthly Māori Innovation Workshop Series. These workshops provide culturally safe spaces for Māori students and staff to explore entrepreneurship on their own terms.

Our relational approach also led to introducing two dedicated Mātauranga Māori prizes in the university's flagship Ideas Challenge, sponsored and judged by the PVC Māori Office. The result was outstanding: 75 out of 314 submissions reflected Mātauranga Māori, demonstrating a strong appetite for culturally grounded entrepreneurship education.

These initiatives are not isolated. They are part of a deliberate, long-term strategy to build a self-sustaining Māori innovation community at Waipapa Taumata Rau, a community where Māori perspectives are embedded, celebrated, and empowered.

Role-Modelling Māori Innovation

Representation is central to our engagement strategy. Role-modelling Māori innovation fosters confidence, aspiration, and belonging, reaffirming that Māori ways



of leading and succeeding are valid and celebrated (Dell et al., 2024).

In all Māori-focused initiatives, facilitators are Māori, bringing cultural authenticity, lived experience, and relevance. Guest speakers span sectors from global tech ventures to kaupapa Māori businesses, showcasing the diverse forms Māori innovation can take.

A Scalable Vision for Indigenous Entrepreneurship Education

CIE's experience demonstrates that Indigenous-led, relational engagement is not only effective but essential for fostering inclusive innovation cultures. Our approach reflects Ruwhiu et al.'s (2021) emphasis on culturally grounded success factors and Mika's (2013) argument for enterprise assistance that builds Māori entrepreneurial capability through social, human, and cultural capital.

While our context is uniquely Aotearoa, the principles of partnership, respect, and contextualised entrepreneurship education offer a scalable framework for institutions worldwide. Building genuine relationships with Indigenous and underrepresented communities is fundamental to creating inclusive, impactful innovation cultures in higher education.

Conclusion: Reimagining the Future of Entrepreneurship Education

The future of entrepreneurship education depends on how well universities engage with the communities

they serve. Our experience at Waipapa Taumata Rau shows that embedding Indigenous leadership and relational engagement strengthens innovation ecosystems and ensures entrepreneurship education is relevant, accessible, and inclusive.

For universities seeking to build more diverse and meaningful entrepreneurship education, the path forward is clear: build with, not for, your communities. This requires investing in relationships, privileging underrepresented voices, and designing initiatives that resonate with the identities and aspirations of students and staff.

Relational, community-led approaches are not confined to one context. Whether engaging with Indigenous peoples, diverse academic disciplines, or gender-diverse communities, the principles of partnership, co-creation, and cultural responsiveness are universally applicable.

To shape the next generation of innovators and leaders, universities must move beyond programme delivery to create entrepreneurship education that reflects who they are, and who they aspire to be. The challenge is not just to teach entrepreneurship, but to ensure it is delivered in ways that are authentic, connected, and transformative.



Darsel Keane

Director of the Business School's Centre
for Innovation and Entrepreneurship



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Darsel Keane is the Director of the Business School's Centre for Innovation and Entrepreneurship (CIE) at Waipapa Taumata Rau, University of Auckland. She is deeply committed to fostering inclusive innovation ecosystems through relational, partnership-led approaches that honour te ao Māori and support underrepresented communities.

With over a decade of leadership experience in entrepreneurship education and innovation ecosystems, Darsel has guided CIE in embedding entrepreneurial mindsets and capabilities across disciplines, academic levels, and diverse cultural contexts.

In the space of Māori entrepreneurship, Darsel is tauiwi. Her mahi focuses on allyship in practice — creating space for Māori leadership, co-designing initiatives, and building authentic, reciprocal relationships grounded in respect and partnership.

Under her leadership, CIE has developed award-winning programmes that nurture future-ready innovators while advancing the University's commitment to economic, social, and environmental prosperity for Aotearoa and the world.

Darsel is currently pursuing a doctoral degree on entrepreneurial mindset in entrepreneurship education at the University of Auckland. She represents the University in international forums on innovation and entrepreneurship leadership and is passionate about growing New Zealand into an inclusive, innovative economy — with universities playing a critical role in that transformation.



Te Maruata (Maru) Maxwell (Ngāpuhi) is the Māori Connector and Programme Coordinator at the Centre for Innovation and Entrepreneurship (CIE) within the University of Auckland Business School. A graduate of Auckland University of Technology with a Bachelor of Arts, Maru brings a deep commitment to fostering inclusive innovation ecosystems that uplift Māori values and aspirations.

In her role, Maru has been instrumental in developing and delivering initiatives that support Māori students and staff to explore entrepreneurship in culturally meaningful ways. She coordinates Kurutao, CIE's Māori Entrepreneurial Leaders Study Tour, which connects Māori students with Māori entrepreneurs and innovators across Aotearoa, providing pathways for leadership and self-determination.

Maru also leads the Innovation Wānanga, a monthly workshop series that creates safe, culturally grounded spaces for Māori students to engage with innovation and entrepreneurship through a Te Ao Māori lens.

Her mahi is grounded in whanaungatanga and manaakitanga, ensuring programmes foster genuine relationships and cultural affirmation. As CIE's Māori Connector, Maru plays a pivotal role in building trust, strengthening community connections, and supporting Māori students to confidently navigate and contribute to the entrepreneurial ecosystem.



Te Maruata (Maru) Maxwell
Māori Connector and Programme
Coordinator at CIE



Waipapa
Taumata Rau
**University
of Auckland**



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The Challenge of Engagement

*Making a Difference
While Staying True to
the University Mission*

Sustainable development requires understanding territorial commitment. How can the university lead this transformation? Unimagdalena holds some answers.

By Pablo Vera Salazar

Commitment to the environment goes beyond specific actions; it represents a comprehensive vision of sustainability that connects the university's traditional missions (teaching, research, and outreach) with territorial needs. In the context of the Universidad del Magdalena (Unimagdalena), communi-

ty engagement has been essential to understanding its needs and generating real, sustainable impact. Through initiatives and institutional policies promoting inclusion and social innovation, the university has demonstrated that transforming the territory while strengthening the social fabric is possible. This article explores how the university assumes its commitment to the territory and identifies key strategies to avoid “failing in the attempt” to generate social and economic transformation in the region. This commitment has evolved from being temporary to becoming the core of the institution's value proposition.

1. The Third Mission and Engagement

Universities must not only educate professionals but also generate social impact in their regions. At Unimagdalena, the third mission materialises through its ability to integrate with territorial dynamics and transform them positively.

To achieve this, Unimagdalena has adopted a results-based management model that places people at the centre and promotes co-creation with the community (Image 1). This approach ensures that the university's decisions and actions are aligned with the expectations of its stakeholders. A flexible and adaptive management model yields concrete results. This process includes active participation of different actors in the design and implementation of policies and projects. Also, Unimagdalena fosters community participation, listening to stakeholders, and co-creating solutions to address social and educational challenges. Not only does this improve the university's social im-

pact, but it also reinforces its role as a regional transformation agent.

This is evident in the implementation of programmes that address educational inequality, such as Talento Magdalena, the Centre for Child Development, the Transformational Leadership School, and the Centre for Innovation and Entrepreneurship, among others.

2. Inclusion Programmes that Transform Lives

The Talento Magdalena programme (https://www.youtube.com/watch?v=RVC_UHzyLpM) is a representative example of how education can be a driver for transformation. Since 2017, it has provided scholarships to young people from historically excluded municipalities, offering not only access to higher education but also psychosocial and academic support to ensure they successfully complete their studies. This comprehensive approach has benefited over 2,000 students, 143 of whom are the first professionals in their families, graduating by 2024. The strategy was designed to ensure students complete their education, generating a positive and sustainable impact in their home communities.

3. Education for Sustainable Development

The University of Magdalena has adopted a comprehensive approach to education for sustainable development, aligned with the United Nations Sustainable Development Goals (SDGs), through its 2030 Development Plan, “Unimagdalena Engaged”. This plan integrates sustainability into all the institution's educa-



tional, research, and social outreach processes, contributing actively to positive territorial transformation.

The university's engagement is demonstrated by innovative academic programmes such as Coastal Marine Engineering—the only one in Colombia and Latin America addressing marine issues comprehensively (<https://www.youtube.com/watch?v=fvWcbj4X7ck>).

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The university has demonstrated that transforming the territory while strengthening the social fabric is possible.

Furthermore, the university promotes sustainability, social inclusion, and local economic development through various projects. The aim is to train professionals capable of tackling global challenges from a local perspective, promoting equity and social justice in their communities. The plan also encourages knowledge creation and transfer in key areas like environmental conservation, sustainable technological innovation, and social responsibility, generating a positive impact on the region.

This educational model not only seeks to improve students' and communities' quality of life but also contributes to achieving the SDGs by promoting more equitable, inclusive, and sustainable territorial development.

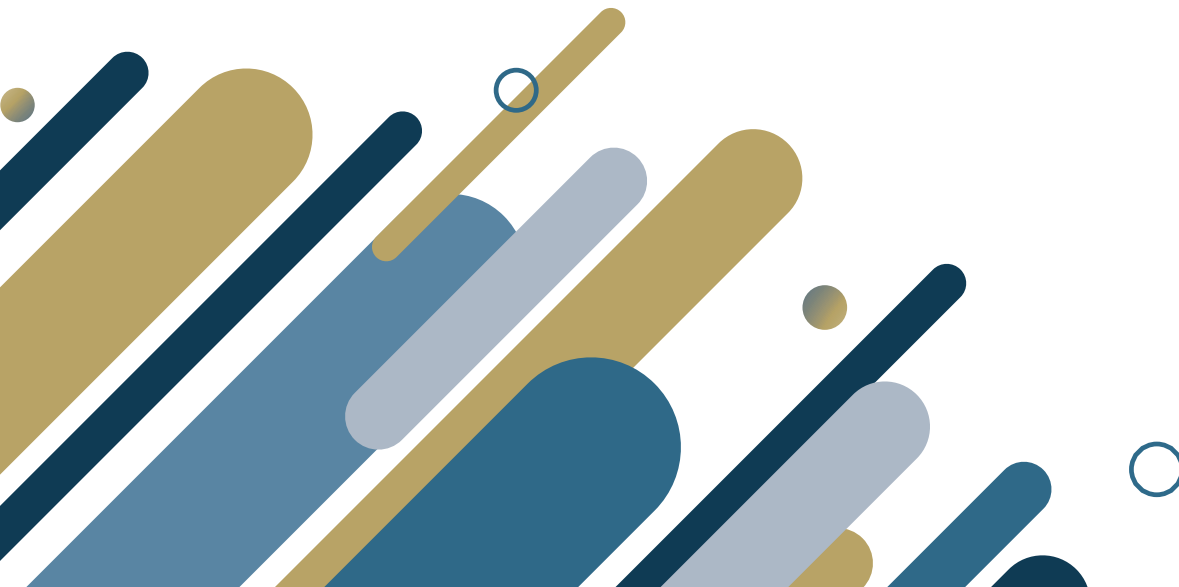
4. Social Innovation at the Core

Social innovation is the core of the value proposition at Unimagdalena. This is illustrated by projects such as Talento Magdalena and the Centre for Comprehensive

Early Childhood Care. These programmes address not only the students' educational needs but also those of their families, fostering genuine and sustained inclusion in higher education.

The Centre for Comprehensive Early Childhood Care, inaugurated in 2022, supports student-parents by offering services such as a workshop classroom for children and a family-friendly lactation space. This pioneering centre in Colombia aims to reduce university dropout rates and promote social inclusion while fostering education and child health. It supports students in their academic development and lays the foundation for the development of future generations.

Both programmes reflect Unimagdalena's commitment to creating innovative solutions that address the region's structural inequalities, positioning Unimagdalena as a benchmark in social inclusion and sustainable development.



Being engaged involves a constant balance between institutional mission and social action. To avoid “failing in the attempt,” universities like Unimagdalena must go beyond their traditional roles, generating social impact and contributing to sustainable territorial development. Through a results-based management model centred on people and fostering community co-creation, Unimagdalena has successfully aligned its decisions and actions with the real needs of the region.

Initiatives like the Talento Magdalena programme and the Centre for Comprehensive Early Childhood Care exemplify how social innovation can transform lives by providing inclusive access to education and comprehensive support to vulnerable students.

The 2030 Development Plan, “Unimagdalena Engaged,” aligned with the SDGs, strengthens the university’s commitment to sustainable development. By implementing innovative programmes and projects promoting social inclusion and local economic development, Unimagdalena trains professionals who not only face global challenges but also contribute to equity and social justice in their communities. These efforts position the university as a benchmark in Colombia’s Caribbean region and nationally, committed to positive and sustainable territorial transformation.



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Pablo Vera Salazar

Rector, Universidad del Magdalena

Pablo Vera Salazar is the current rector of Universidad del Magdalena in Santa Marta, Colombia. Professor Vera Salazar is a Civil Engineer, he holds an MBA and a PhD in Business Management from the Universidad Complutense de Madrid, obtained through a Fundación Carolina scholarship. His doctoral thesis focused on the organisational factors determining success in university-business cooperation.

Professor Vera Salazar is the first student of Universidad del Magdalena to be elected Rector. He has held this position for two consecutive terms since 2016. Under his leadership, the university has undergone a significant transformation, focusing on innovation, entrepreneurship, and sustainable development. Also, in his term the 2030 Development Plan, "Engaged Unimagdalena" have been implemented by consolidating the university as a benchmark in educational inclusion and social equity, particularly through the Talento Magdalena programme.

In addition to his focus on high-quality education, Professor Vera Salazar has promoted strategic alliances such as CEI-MAR*, which have strengthened the university's research and social impact in the region. His leadership has been key to positioning Universidad del Magdalena as an engaged institution to the SDGs and the positive transformation of Santa Marta and the Colombian-Caribbean area.





A Quest for Quality

A Networked Approach

Creating an integrated network across Academic Quality and Faculty Teaching Development fosters a culture of continuous university improvement.

By Tashmin Khamis

As the global landscape of higher education continues to evolve, institutions are increasingly called upon to not only impart knowledge but also to cultivate innovation, entrepreneurship, and civic engagement. In this context, the Aga Khan University (AKU), through its Network of Quality, Teaching and Learning (QTL_net), offers a compelling model for how universities in Africa and Asia can lead this transformation.

Rethinking Higher Education for the 21st Century

The traditional model of higher education—centered on content delivery and rote learning—is no longer sufficient in a world defined by rapid technological change, complex global challenges, and shifting labor markets. To-

day's students must be equipped not only with disciplinary knowledge but also with the skills to think critically, solve problems creatively, and engage meaningfully with their communities.

AKU's QTL_net, established in 2013, embodies this shift. It was created to support excellence in teaching and learning across AKU's campuses in East Africa, South and Central Asia, and the United Kingdom. The network's mission is to ensure that students receive a transformative education that prepares them to be leaders, innovators, and change-makers in their societies.

Building a Culture of Teaching Excellence

One of QTL_net's core contributions is its emphasis on faculty development. Recognizing that many university instructors enter academia with deep subject expertise but limited pedagogical training, QTL_net offers a range of professional development opportunities. These include workshops, mentorship programs, and fellowships that focus on active learning, inclusive teaching, and the scholarship of teaching and learning (SoTL).

Over 10,000 participants have engaged with QTL_net activities since its inception, with more than 150 workshops delivered and an impressive 82% return rate among faculty members. This sustained engagement reflects a growing recognition that teaching excellence is foundational to student success and institutional impact.

Creating a Quality Culture

QTL_net's Quality Office is a support, rather than control, structure providing Academic Programmes own-

ership over their quality journeys. Quality enhancement is achieved through collaborative efforts, where faculty members share best practices, engage in peer reviews, and participate in professional development activities. By fostering a culture of continuous improvement, AKU ensures that the quality of education remains high and responsive to the evolving needs of students and society.

Embracing Digital and Blended Learning

The COVID-19 pandemic accelerated the adoption of digital learning technologies, and QTL_net was at the forefront of this transition. Through its Blended and Digital Learning programme, the network supported faculty in integrating technology into their teaching practices. Initiatives such as the Faculty Development Programme in Blended Learning (FDPBL), the EdTech Lounge, and the Virtual Learning Environment (VLE) have enabled instructors to design engaging, student-centered online courses.

These efforts have not only enhanced the quality of education during the pandemic but also laid the groundwork for more flexible, accessible, and scalable learning models in the future. In regions where infrastructure and access remain challenges, such innovations are particularly critical.

Fostering Entrepreneurial Mindsets

Entrepreneurship in higher education is not limited to business creation; it encompasses a mindset of initiative, resilience, and innovation. QTL_net fosters this mindset by encouraging faculty and students to experiment with new pedagogies, engage in reflective



practice, and pursue research on teaching and learning.

The network's support for SoTL grants and conferences provides a platform for educators to explore questions such as: How can we better support student agency? What teaching strategies promote creativity and collaboration? How can assessment be used to drive deeper learning? These inquiries are essential for cultivating the kind of entrepreneurial thinking that today's world demands.

Engaging with Communities

Another hallmark of QTL_net's approach is its emphasis on community engagement. AKU's commitment to human welfare is reflected in its integration of service

learning, community-based education, and socially responsive curricula. Through these initiatives, students are not only learning about the world—they are learning with and from the communities they serve.

This model of engaged learning aligns with global trends in higher education that emphasize social impact and civic responsibility. It also resonates deeply in the African and Asian contexts, where universities are increasingly seen as engines of development and social transformation.

Quality Assurance and Enhancement

Central to QTL_net's mission is the commitment to quality assurance and enhancement. The network em-



plays a rigorous approach to evaluating and improving teaching practices, ensuring that educational standards are consistently met and exceeded. This involves continuous monitoring, feedback mechanisms, and the use of data-driven insights to inform decision-making.

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Over 10,000 participants have engaged with QTL_net activities since its inception, with more than 150 work-shops delivered and an impressive 82% return rate among faculty members.

A Model for the Global South

What makes QTL_net particularly noteworthy is its contextual relevance. While many models of educational innovation are imported from the Global North, QTL_net is rooted in the realities of the Global South. It addresses the unique challenges faced by institutions in Africa and Asia—such as resource constraints, diverse student populations, and rapidly changing societal needs—while leveraging local strengths and knowledge systems.

By building capacity from within, QTL_net empowers educators to lead change in their own institutions and communities. Its success demonstrates that excellence in teaching and learning is not a luxury but a necessity—and that it is achievable even in resource-limited settings.



Looking Ahead

The Future of Engagement and Innovation

As we look to the future, the work of QTL_net offers several key insights for higher education leaders, policymakers, and practitioners:

1. Invest in Faculty Development: Teaching excellence must be cultivated through ongoing professional learning, mentorship, and recognition.

2. Leverage Technology Thoughtfully: Digital tools can enhance learning, but they must be used in ways that are pedagogically sound and contextually appropriate.

3. Promote a Quality Culture: Empowering educators to own their curriculum and engage in cyclical review self-assessment that results in generating their own action plans leads to continuous improvement.

4. Center Community Engagement: Universities must be responsive to the needs of their communities and prepare students through experiential learning and teaching that is relevant to their contexts so that they may act as change agents.

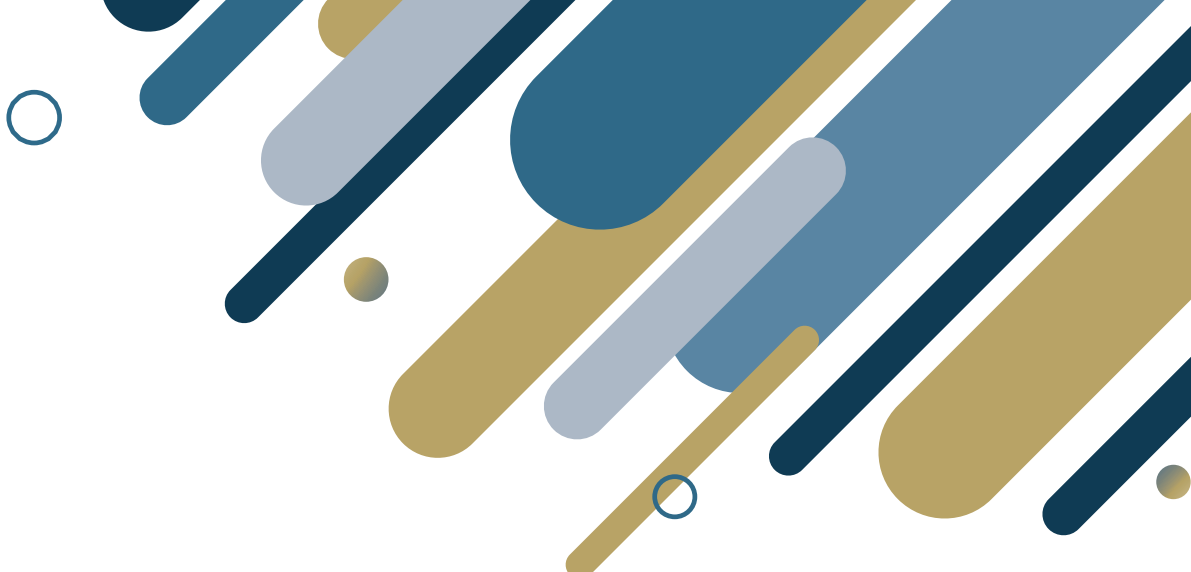
5. Support Entrepreneurial Thinking: Support Entrepreneurial Thinking: Education that empowers students to take initiative, solve problems, and create value in diverse ways fosters leadership skills.



The future of entrepreneurship and engagement in higher education lies in our ability to reimagine what it means to teach and learn, ensuring that this is aligned with quality enhancement efforts, which must be owned by higher education leaders and faculty delivering programmes. The Aga Khan University's networked and integrated approach to faculty de-

velopment on teaching, support for teaching using technology, and engaging in cyclical programme reviews provides a powerful example of how this can be done. By linking teaching excellence to quality assurance, as in QTL_net's model, the focus remains on continuous improvement and creating a quality culture.





Tashmin Khamis

Vice Provost for Quality, Teaching and Learning

Professor Tashmin Khamis is the founder of AKU's Network of Quality, Teaching and Learning and AKU's first Vice Provost for Quality, Teaching and Learning. She currently serves as Associate Vice President Academic-Teaching and Learning at the Southern Alberta Institute of Technology. She has served as a Board Member on INQAAHE (The International Network of Quality Assurance Agencies in Higher Education) and as President of the East African Higher Education Quality Assurance Network (EAQAN). She is one of only 1500 Principal Fellows of the Higher Education Academy (PFHEA), globally. She has served on

the Global Advisory Board of Advance HE (UK). She holds a PhD from Kings College London and an MBA in Higher Education Management from UCL-IOE, London. She is involved in University Improvement programme efforts in Northern Pakistan, Central Asia and Africa, including being called upon by The German Academic Exchange Service's (DAAD) quality enhancement efforts. She was a member of the Aga Khan Schools board in East Africa and currently serves on the Board of Directors at the Institute of Ismaili Studies in London, UK.

The Future of Entrepreneurship and the Social Engagement of Higher Education in Latin America

In four decades, the UNAD has gone from being an educational initiative for lower-income populations to leading hybrid education in Ibero-America, with relevance, quality, innovation, and technology.

By Jaime Alberto Leal Afanador

Colombia's National Open and Distance University (UNAD) is a public institution, created via an Act of the Republic in 1981, as a pioneer in distance education, with the aim of expanding access to education at all levels for lower-income populations.

Throughout its history of over 40 years, the university has undergone significant transformations in educational technology and has faced resistance from the traditional, campus-based academic community toward distance learning.

Following the Covid-19 pandemic, both Colombia and universities worldwide recognized the previously underestimated potential of distance, virtual, and now hybrid education; these, however, were capabilities that UNAD had already integrated into its operations.

The author of this article is the rector of this university, who has been continuously re-elected for over two decades. During this time, he has consolidated a systemic management model, underpinned by technological innovation





and a strong institutional commitment. This leadership has positioned UNAD not only as the largest university in Colombia, sustainable and in constant growth, but also as an institution whose expansion, quality, and leadership (as evidenced by its presidency of the Ibero-American Association of Distance Higher Education [AIESAD] and various national and regional networks) are projecting its influence into other countries and continents.

When, in 1981, the National Open and Distance University (UNAD) was established as an institution to provide educational opportunities for people from lower-income backgrounds (at the time university education was accessible to less than 5% of the population), it offered a form of education that today seems outdated. It was delivered through the postal mailing of academic assignments and occasional face-to-face meetings between teachers and students, and was regarded as poor education for the poor, since the few who could access university did so in traditional institutions with purely face-to-face instruction and minimal educational technology.

Amid a complex social and economic environment, both nationally and within the education sector, and facing unfair stigmatization from those leading education policies, who for many years discredited distance education, UNAD gradually began to demonstrate that, contrary to common perceptions, distance education is more demanding, more rigorous, and requires greater resources, while also being more necessary and relevant than purely face-to-face education. To achieve this, UNAD undertook a process of organiza-

tional reengineering, structuring itself around networks and systems that would ensure the quality of its content, its learning methods, and its teaching staff, regardless of the location, time, or environment in which students were learning. In this way, the university not only leveraged technology to improve processes and assessments but also developed its own innovations in educational technology (blockchain, proctoring systems, LMS, bots or automated teaching assistants, virtual assistants, and artificial intelligence) to guarantee the integrity of content and to enable reliable and timely self-directed learning processes.

Academic and organizational innovation became an institutional hallmark. A range of virtual programs previously unattempted by other universities was provided, as well as the continuity (for more than two decades) of a strong university governance model, programs of place-based education across the territory, physical laboratories and campuses to support academic work, provide teacher support and promote student well-being, and clear commitment across all organizational areas and programs to digital transformation as a means of supporting education and service delivery.

Many of these developments have been pioneering and unique within the Colombian and Ibero-American higher education systems, to the extent that the university is now a regional leader in hybrid education and a promoter of collaborative networks of networks, aimed at strengthening the commitment to national and international higher education to quality, relevance, access, and the role of education as a driver of social solutions.

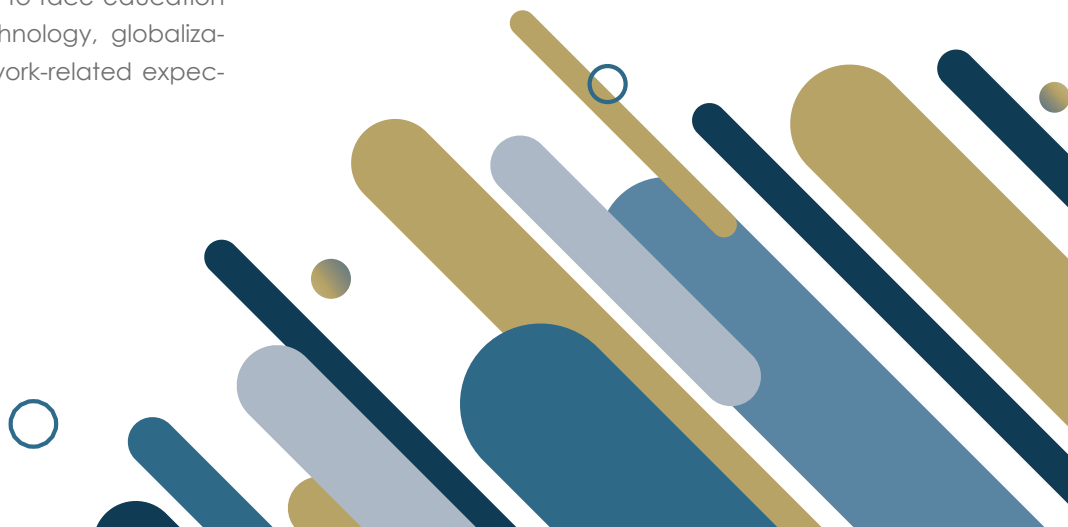
Today, higher education in Colombia has reached around 55% of coverage, and enrolment in virtual and hybrid education continues to grow. UNAD remains the largest and most established provider, with more than 250,000 students enrolled from Colombia and dozens of other countries. This is thanks to its flexible model, with multiple academic periods, multiple learning environments, multi-generational learning, self-directed learning (heutagogy), and a learn-to-learn approach, all at low cost and supported by in-house, high-quality technological developments.

While the traditional education system became increasingly entrenched in face-to-face instruction, UNAD was designing alternatives to adapt to the expectations and needs of its students. And while many of those universities were caught off guard by the Covid-19 pandemic, UNAD was only strengthened further through its demonstration that education is not a service to be sought out and purchased, but a right that should be within everyone's reach.

Distance, virtual, and hybrid education supports situated learning, flexibility, and learning at the pace required by the student, just as face-to-face education does. With advancements in technology, globalization, and shifts in the social and work-related expecta-

tations of the society of knowledge, learning and its relevance has gained greater value. This foundation has contributed to the widespread acceptance and demand for an educational offering and service such as that of UNAD, attracting generations of learners of all ages, from diverse geographic contexts and across different fields of knowledge.

Thanks to the development of UNAD, its pedagogical approaches, academic offerings, and interactions between programs, as well as the expansion of its national and now intercontinental presence, new paradigms are being established. Now it is the university that reaches the student (and not the other way around, as was the case in the past), hybridity enables distance education without distance, and the educational model must allow students to learn at their own pace, according to their needs and the expectations of the labour market. For this reason, UNAD's approach is particularly relevant in supporting educational access, promoting entrepreneurship, and strengthening partnerships between education, government, and industry.







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UNAD's approach is particularly relevant in supporting educational access, promoting entrepreneurship, and strengthening partnerships between education, government, and industry.



Jaime Alberto Leal Afanador

Rector

Jaime Alberto Leal Afanador has served as the rector of the National Open and Distance University (UNAD) since 2004 and has since been re-elected six times.

He holds a degree in Food Engineering from Incca University of Colombia, a specialization in Educational Planning from the University of Rennes in France, a master's degree in University Teaching from La Salle University in Colombia, and a doctorate in Instructional Technology and Distance Education from Nova Southeastern University in Florida, United States.

He regularly publishes analysis and opinion columns in national media outlets in Colombia. He also serves as president of major associations dedicated to open and distance

education in Colombia and Latin America, including the Colombian Association of Higher Education Institutions (ACESAD), the Ibero-American Association of Distance Higher Education (AIESAD), the Inter-American Consortium for Distance Education (CREAD), and the Ibero-American Association of Educational Television (ATEI). Currently, he is president of the universities of the Central Region of Colombia within the State University System. In all his roles, he actively promotes the improvement in the quality of education. He is also the author of numerous publications, including "Educación, Virtualidad e Innovación" (Education, Virtuality and Innovation) "Trabajo Inteligente Productivo TIP" (Smart, Productive Wok) and "Colombianitud" (Colombianity).



From Curriculum to Commercialization

FAST-NUCES and the Evolving Landscape of Entrepreneurial Engagement in Pakistan

This chapter explores the transformative journey of entrepreneurship and engagement within Pakistan's higher education sector, focusing on FAST-NUCES's strategic initiatives. It delves into the university's efforts to align academic programs with entrepreneurial objectives, foster innovation through incubation facilities, and contribute to national economic development.

By Muhammad Arshad Islam & Umair Manzoor

In the 21st century, higher education institutions (HEIs) are increasingly recognized as pivotal players in fostering entrepreneurship and innovation. In Pakistan, this paradigm shift is gaining momentum, with universities striving to integrate entrepreneurial thinking into their core functions. FAST-NUCES stands at the forefront of this movement, leveraging its academic excellence to cultivate an entrepreneurial ecosystem that reso-

nates with national development goals. Recognizing the growing importance of entrepreneurship in higher education, FAST-NUCES has positioned itself as a key enabler of innovation and venture creation within Pakistan's academic landscape. Central to this mission is the university's Office of Research, Innovation, and Commercialization (ORIC) (National University of Computer and Emerging Sciences, n.d.), which drives a ho-



listic strategy to embed entrepreneurial thinking across all campuses.

1. Orientation and Strategy

Entrepreneurship in higher education has evolved from peripheral activity to a central driver of economic growth and societal transformation. In Pakistan, where 60% of the population is under 30 (Pakistan Bureau of Statistics, 2021), addressing youth unemploy-

ment and skill gaps requires systemic integration of entrepreneurship into academia. The Higher Education Commission (HEC) of Pakistan has been instrumental in this shift, mandating all universities establish Offices of Research, Innovation, and Commercialization (ORICs) to strengthen academia-industry linkages and foster startup ecosystems (Higher Education Commission Pakistan, n.d.). FAST-NUCES exemplifies this vision, aligning its institutional strategy (National University of Computer and Emerging Sciences, n.d.-b) with national initi-



atives like the Digital Pakistan Initiative and National Startup Vision (Ministry of Information Technology & Telecommunication, 2018). The university's ORIC plays a central role in this effort, acting as a nexus that connects academic research with market needs and supports initiatives in technology transfer, patenting, and startup incubation.

For instance, FAST-NUCES's ORIC serves as a hub for ideation, mentorship, and funding, mirroring HEC's broader efforts to incubate over 800 startups across 38 Business Incubation Centers (BICs) in Pakistani universities (Higher Education Commission Pakistan, n.d.). The university's curriculum – spanning BBA (Entrepreneurship Track), BS(CS), and MBA — integrates venture creation and technology commercialization, ensuring students across disciplines engage with entrepreneurial concepts. Courses like Innovation and Entrepreneurship in BS(CS) and capstone projects in MBA emphasize practical problem-solving, bridging the gap between theory and market needs. Additionally, FAST-NUCES's entrepreneurial ecosystem actively promotes inclusion and diversity, particularly through targeted support for startups. FAST-NUCES has also taken significant strides toward gender-inclusive entrepreneurship through the development and implementation of a Gender Diversity, Equity, and Inclusion (DEI) Toolkit (National University of Computer and Emerging Sciences, n.d.).

2. People and Organizational Capacity

The university's entrepreneurial transformation is underpinned by its investment in people and institutional infrastructure. Faculty development programs are

routinely conducted to introduce pedagogical approaches aligned with entrepreneurship education, such as design thinking and lean startup methodology. Faculty are also encouraged to engage in applied research and consultancies with industry, ensuring that classroom instruction is enriched by real-world relevance.

Student-led initiatives play a vital role in building this entrepreneurial culture. The Entrepreneurship Society at FAST, along with global competitions like the HULT Prize@FAST (The Nation, 2023), provide students with experiential learning platforms that cultivate initiative, leadership, and critical problem-solving. The university's collaboration with HEC-backed programs, such as the Innovator Seed Fund (ISF), further empowers students to transform ideas into ventures.

FAST-NUCES actively fosters an entrepreneurial ecosystem not only for its students but also for its faculty members. The university encourages faculty to engage in entrepreneurial endeavors through industry collaborations, startup ventures, and consultancy in cutting-edge technology domains (FAST ICDL Lab, n.d.-a; National University of Computer and Emerging Sciences, 2024). The university hosts incubation facilities equipped with prototyping labs, mentorship networks, and business development services. These facilities have supported a number of high-impact startups in areas ranging from EdTech (IParhai, n.d.) and ICDesign (FAST ICDL Lab, n.d.-b) to FinTech (National University of Computer and Emerging Sciences, n.d.) and mobile applications. Faculty members are supported in translating their research into real-world solutions,



FAST-NUCES Entrepreneurial Transformation



often leading to the development of innovative products and services. This dual role—as educators and entrepreneurs—not only enriches classroom teaching with practical insights but also strengthens the university's contribution to Pakistan's knowledge economy and high-tech industry. Strategic partnerships with industry players such as Jazz XLR8 (Digital Pakistan, n.d.), Ignite (Ignite, n.d.), and PTCL (Pakistan Telecommunication Company Limited, n.d.), further augment these efforts. Through these collaborations, startups gain access to funding, professional networks, and go-to-market strategies.

3. Integrating Education, Research, and Community Engagement

FAST-NUCES exemplifies the “third mission” of higher education—community engagement and social impact—alongside teaching and research. Research is aligned with societal needs and commercial potential. Faculty and students are encouraged to file patents, launch spin-offs, and pursue collaborative R&D with industry. For example, projects like AI-driven Ed-Tech tools address gaps in education delivery, while “Tech for Good” initiatives engage students in community-oriented innovation challenges (National Uni-

versity of Computer and Emerging Sciences, n.d.-b). This tripartite integration ensures that entrepreneurship at FAST-NUCES is not confined to the business domain but permeates all aspects of academic life—from curriculum and research to community development.

4. Innovation and Impact

The impact of FAST-NUCES's entrepreneurship strategy is evident in the real-world success of its alumni and ventures. A standout success is DEVSINC, a global software engineering and consulting firm founded by a FAST alumnus. Starting as a modest venture, DEVSINC has now grown to employ over 1000 professionals, delivering enterprise solutions to clients across North America, Europe, and the Middle East. This remarkable growth is a testament to the entrepreneurial foundation built at FAST-NUCES — where students are encouraged not only to master technology, but to lead with vision (VIS Credit Rating Company, n.d.).

The P@SHA Salary Survey 2021 highlights how Pakistani universities, especially FAST-NUCES, are closing the gap between academia and industry—a key aspect of entrepreneurial education. The survey assessed universities on Salary Premiums for Graduates (reflecting industry trust in their skills), Innovation and Research Output (aligned with FAST-NUCES's ORIC commercialization efforts), and Alumni Presence in IT sectors (showing industry ties). FAST-NUCES's higher graduate salaries reflect successful startup incubation, with alumni ventures like Patari and Tintash disrupting markets. The innovation metric also highlights the impact of courses such as Technology Commercialization, integral to the university's mission to turn research into market solutions.

Challenges and Areas for Further Development

While FAST-NUCES has made commendable strides in embedding entrepreneurship within its academic and institutional fabric, several challenges still constrain its full potential—particularly in terms of funding sustainability, incubation ecosystem parity, and institutional scaling.

Dependence on External Funding for Undergraduate Projects: One significant limitation is the university's reliance on external funding bodies, such as Ignite's Final Year Project (FYP) support program, for sponsoring undergraduate student innovation. Given the scale of undergraduate enrollment, the university struggles to internally support the large volume of student projects requiring financial backing.

Underdeveloped Business Incubation Capacity: The university's Business Incubation Centers (BICs), while symbolically significant, are still in their developmental stages and have yet to offer a level playing field when compared to national facilities like the National Incubation Centers (NICs) run by Ignite across major cities in Pakistan. Unlike NICs, which offer extensive support including dedicated mentorship, access to venture capital networks, legal services, and international exposure, the incubation programs at FAST-NUCES are currently limited in scope and scale.

Scalability and Institutional Integration: With six campuses operating semi-autonomously, FAST-NUCES faces a scalability challenge in harmonizing its entrepreneurial programs and policies across locations. Some campuses exhibit strong engagement in startup eco-

systems, while others remain nascent in such efforts.

FAST-NUCES exemplifies how HEIs in Pakistan can evolve to become hubs of entrepreneurship and engagement. Through strategic orientation, capacity building, and a focus on innovation, the university not only enhances its academic offerings but also contributes significantly to national development. FAST-NUCES's model, underpinned by HEC's ORIC mandate, demonstrates how universities can catalyze entrepreneurial ecosystems. By combining strategic curriculum design, incubation support, and industry synergy, it addresses Pakistan's socio-economic challenges while contributing to global innovation landscapes. Looking ahead, FAST-NUCES is well-positioned to deepen its impact. Opportunities exist for developing tax incentives for university-affiliated startups, expanding international partnerships that are already developed with the help of participation in multiple Erasmus consortiums.

Digital Pakistan. (n.d.). Jazz and FAST-NUCES partner for inclusive innovation. <https://digitalpakistan.pk/jazz-and-fast-nuces-partner-for-inclusive-innovation/>

FAST ICDL Lab. (n.d.). Home. <https://www.fasticdlab.com/>

FAST ICDL Lab. (n.d.). Team Page. <https://www.fasticdlab.com/team-page>

Higher Education Commission Pakistan. (n.d.). Entrepreneurial and Business Incubation Centers (EBIC). <https://www.hec.gov.pk/english/services/universities/ebic/Pages/default.aspx>

Ignite. (n.d.). Completed Projects. <https://ignite.org.pk/projects-completed/>

IParhai. (n.d.). About Us. <https://iparhai.com/#/about>

Ministry of Information Technology & Telecommunication. (2018). Digital Pakistan Policy. [https://moib.gov.pk/Downloads/Policy/DIGITAL_PAKISTAN_POLICY\(22-05-2018\).pdf](https://moib.gov.pk/Downloads/Policy/DIGITAL_PAKISTAN_POLICY(22-05-2018).pdf)

National University of Computer and Emerging Sciences. (2024). Annual Report 2023–24. <https://nu.edu.pk/public/downloads/AnnualReportForm/Annual%20Report%202023-24.pdf?241028>

National University of Computer and Emerging Sciences. (n.d.-a). BBA Program. <https://nu.edu.pk/Program/BBA>

National University of Computer and Emerging Sciences. (n.d.-b). BS (Computer Science) Program. [https://nu.edu.pk/Program/BS\(CS\)](https://nu.edu.pk/Program/BS(CS))

National University of Computer and Emerging Sciences. (n.d.-c). Center of Excellence in Fintech. <https://nu.edu.pk/CoEE/fintech>

National University of Computer and Emerging Sciences. (n.d.-d). Incubation Facilities at ORIC. <https://www.nu.edu.pk/oric/IncubationFacilities>

National University of Computer and Emerging Sciences. (n.d.-e). MBA Program. <https://nu.edu.pk/Program/MBA>

National University of Computer and Emerging Sciences. (n.d.-f). Office of Research, Innovation and Commercialization (ORIC). <https://nu.edu.pk/ORIC/>

National University of Computer and Emerging Sciences. (n.d.-g). Student Societies – Lahore Campus. <https://lhr.nu.edu.pk/societies/>

National University of Computer and Emerging Sciences. (n.d.-h). University Research Profile – ORIC. <https://www.nu.edu.pk/Oric/UniversityResearchProfile>

National University of Computer and Emerging Sciences. (n.d.-i). Vision and Mission. <https://www.nu.edu.pk/vision-and-mission>

Pakistan Bureau of Statistics. (2021). Labour Force Survey 2020–21 (Table 1). https://www.pbs.gov.pk/sites/default/files/labour_force/publications/lfs2020_21/tables/Table_1.pdf

Pakistan Telecommunication Company Limited (PTCL). (n.d.). PTCL Press Release. <https://ptcl.com.pk/Home/PressReleaseDetail/?ItemId=763&linkId=130>

The Nation. (2023, February 2). HEC for joint work on entrepreneurship promotion in Pakistan. <https://www.nation.com.pk/02-Feb-2023/hec-for-joint-work-on-entrepreneurship-promotion-in-pakistan>

VIS Credit Rating Company. (n.d.). Rating Report: National University of Computer and Emerging Sciences. https://docs.vis.com.pk/RatingReports/OP_01101201001_00011012.pdf

M. Arshad Islam

Professor

Dr. M. Arshad Islam is a seasoned academic and quality assurance leader with extensive experience in teaching, research, and institutional development. He has served in key roles at FAST-National University of Computer and Emerging Sciences (NUCES), Ghulam Ishaq Khan Institute of Engineering Sciences

and Technology (GIKI), and Capital University of Science & Technology (CUST).

Dr. Islam has held strategic leadership roles in the Office of Institutional Quality Assessment and Enhancement (IQAE), where he has led institutional planning, curriculum alignment, outcome-based education (OBE) implementation, and accreditation processes. He played a central role in representing FAST-NUCES in an Erasmus+ consortium focused on international accreditation.

His research interests include Scientometrics, Security and Communication Networks, and Scientific Programming, with publications in leading journals. He holds a PhD in Information Engineering from the University of Konstanz, Germany, and is committed to advancing academic excellence through innovation and strategic quality enhancement.



Umair Manzoor

Manager, Office of Institutional Quality Assessment and Enhancement

Umair Manzoor is an experienced higher education quality assurance professional with over a decade of experience. He currently serves as Manager at the Office of Institutional Quality Assessment and Enhancement (IQAE) at FAST-National University of Computer and Emerging Sciences, Islamabad campus, where he leads strategic planning, accreditation, rankings, and stakeholder-based quality enhancement initiatives.

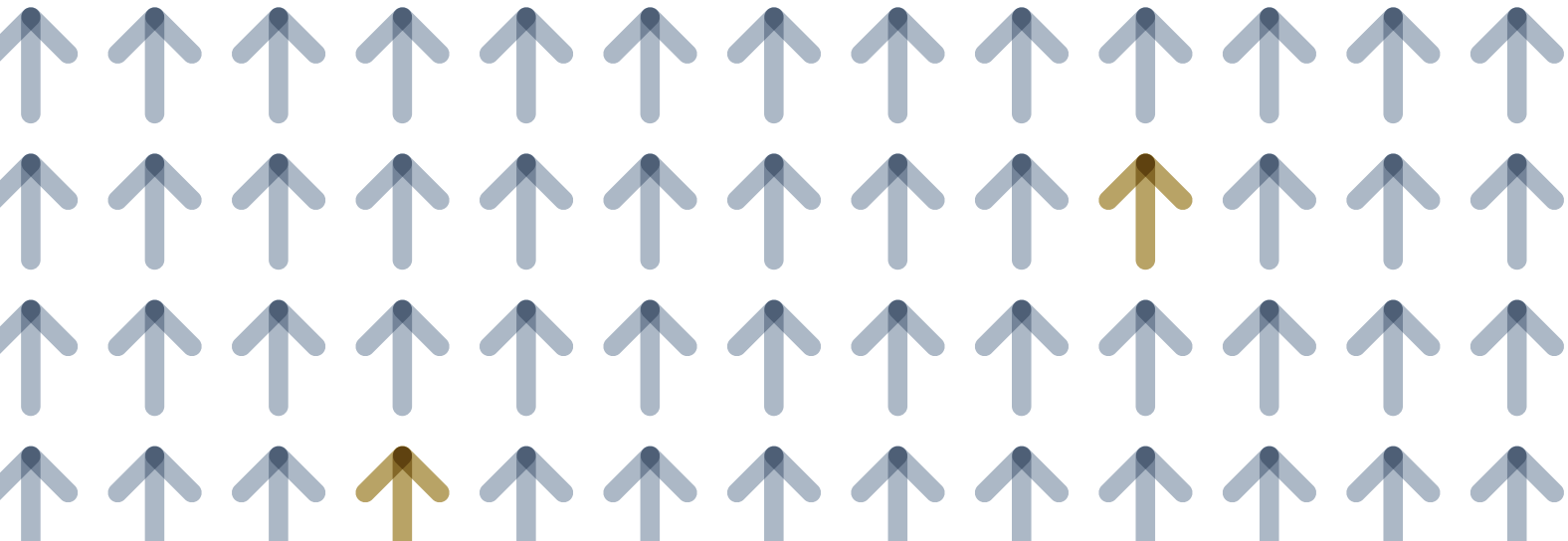
Umair has contributed to international quality frameworks through the Erasmus+ SSAPI project, collaborating with universities across Europe and South Asia. He holds an MS in Engineering Management from UET Taxila.

He has authored peer-reviewed publications in international journals, focusing on employability, institutional response to crises, and student wellbeing. Umair is committed to driving institutional excellence through data-driven decision-making, policy innovation, and global engagement.

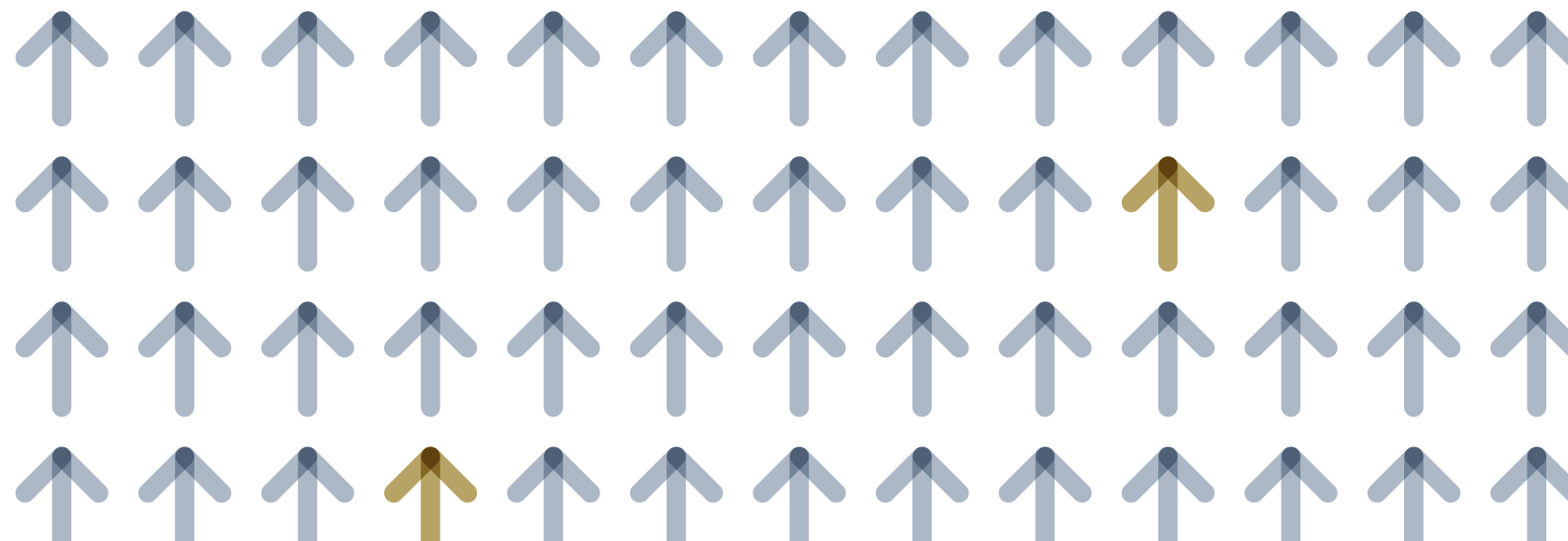


Final

CON CLUSION



Section 4



Reimagining Higher Education through Entrepreneurship and Engagement

The future of higher education is shaped by universities daring to redefine excellence. When institutions place entrepreneurship and engagement at their core, they move from preserving knowledge to transforming societies — turning ideas into action, and impact into the true measure of success.

Lina Landinez & Thorsten Kliewe

At the heart of this book lies our shared conviction: higher education must go beyond a provider of knowledge to become a generator of social, economic, and cultural impact. The cases from Latin America, the Middle East, Asia-Pacific, and Africa illustrate how this vision has taken shape, showing how universities challenge the status quo and embrace entrepreneurship

and engagement as core to their mission. We, together, pursue the “third mission,” where innovation, civic responsibility, and university–community partnerships stand alongside teaching and research as defining functions. What emerges is a picture of impact hubs where entrepreneurship and engagement are essential drivers of transformation.



Entrepreneurship has become a core institutional mission, no longer confined to business schools or specialised programs, but framed as an ethos that permeates teaching, research, and community engagement. In line with ACEEU's understanding, entrepreneurial universities are strategically oriented to deliver societal contributions, cultivating entrepreneurial mindsets, fostering diverse career pathways, and translating research into solutions with commercial and social value. The cases in this volume, from AIEP in Chile and Fidélitas in Costa Rica to CUT in South Africa, UNCuyo in Argentina, and Pan-Atlantic University in Nigeria, demonstrate this shift, preparing students as innovators, intrapreneurs, and changemakers within their ecosystems.

Engagement has been redefined as a mission of equity, inclusion, and co-creation. In ACEEU's view, an engaged university aligns education and research with societal needs, integrates external stakeholders, and builds organisational capacity to generate social and cultural impact. The cases in this volume exemplify this orientation in diverse ways: Universidad del Magdalena and UNAD in Colombia expand access and equity; the University of Auckland builds a Māori innovation community through whanaungatanga; Aga Khan University embeds service learning across regions; FAST-NUCES in Pakistan links research to community challenges; and NMIMS in India empowers grassroots adolescent entrepreneurs.

Digital transformation and inclusivity are cross-cutting enablers of entrepreneurial and engaged universities. Universities must leverage technology to expand ac-

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The beauty of this shift is that it redefines what an excellent university truly is: an impact hub that cultivates innovators, empowers communities, and co-creates sustainable futures.



cess, foster innovation, and strengthen their societal impact. Hybrid and technology-enabled models, such as those at UNAD in Colombia and MSU in Malaysia, show how digital infrastructures and lifelong learning pathways can democratise participation. AI further accelerates this change, opening new avenues for underrepresented groups, as seen in Dubai and Nigeria. Yet inclusivity must also be cultural and social, reflected in Māori innovation in New Zealand, grassroots entrepreneurship in India, and Indigenous knowledge integration in South Africa.

The lessons across regions are clear: universities must make entrepreneurship their ethos, engagement their method, inclusivity their value, and digital transformation their enabler. The beauty of this shift is that it redefines what an excellent university truly is: one that excels beyond the rankings or research outputs, and demonstrates its capacity to act as an impact hub, cultivating innovators, empowering communities, and co-creating sustainable futures. With this change of focus, universities will increasingly be challenged to showcase both their potential and their realised impact, opening the door for many more regional and currently less visible institutions to rise onto the global stage of higher education excellence. At ACEEU, we are proud to contribute to this movement by offering

external evaluation of universities' entrepreneurship and engagement practices, supporting organisational development, and providing international recognition of achievements that matter, not only to academia, but to society at large.

Dr. Lina Landinez

CEO of ACEEU

Prof. Dr. Thorsten Kliewe

Chair of ACEEU



