STORY 4

Transnational collaboration transforming technical construction education in Nigeria

The Nigerian AECO sector is a key contributor to national economic development but is characterised by challenges, including technological laggardness, fragmentation, infrastructural needs, and macroeconomic volatility.

Traditional approaches to construction have relied heavily on manual labour and fragmented workflows, creating inefficiencies and limiting opportunities for collaboration. At the same time, graduates often leave educational programmes without the digital skills demanded by modern construction projects.

Autodesk Learning Partner, Gribs Integrated Services, is playing its part in addressing digital skills needs to address these challenges through the DT4TVET initiative, anchored by Dr. Dubem Ikediashi, the Principal Investigator, is a transnational education collaboration between Edinburgh Napier University, UK and the University of Uyo, Nigeria with support from the British Council.

By integrating BIM and immersive technologies into teaching and learning, it empowers instructors to deliver more effective, inclusive, and innovative education. The programme also supports the employability of young construction professionals, giving them the tools to meet international standards and thrive in a globalised market.

Dr Christopher Chidi Belonwu from Gribs Integrated Services says, *"We are proud to be part of the DT4TVET initiative – contributing to tackling the digital adoption challenge through awareness workshops and seminars on the potential of digital technologies in the construction sector.*

"We are partnering with professional bodies and schools to emphasise the importance of digital technologies in the construction industry – and this includes building capacity and capability through a train-the-trainer model."

Collaborating to modernise TVET

Construction educators and professionals gathered at the University of Uyo in Nigeria for a two-day workshop. The event saw educators, instructors, and industry professionals from the UK and Nigeria collaborate to equip Nigerian TVET instructors with the digital skills they need to bring their students into the era of Construction 4.0.

Thirty-two participants from universities, polytechnics, and technical colleges across Nigeria engaged in hands-on sessions using Autodesk Revit and Navisworks Manage. Participants explored how BIM can transform project planning, coordination, and collaboration in construction.

The sessions highlighted the power of immersive technologies, including Virtual and Augmented Reality, to visualise construction tasks before a single brick is laid. By allowing students and professionals to simulate workflows digitally, the workshop addressed a pressing challenge: the reliance on manual methods that are often slow, error-prone, and costly.

During the workshop, participants experienced firsthand how BIM can:

- Reduce errors and rework, saving time and costs
- Encourage collaboration between professionals and disciplines
- Promote inclusivity, allowing female professionals and those less able to participate fully
- Align Nigerian construction practices with international standards

Participants valued the practical nature of the workshop and highlighted the importance of new BIM skills – for them and for their students. Eric Emeka Agu, a lecturer from the Institute of Management and Technology Enugu, summed it up, *"It's the in thing. Let's all embrace BIM for the future of our profession and for sustainable built environment."*

Cascading learnings to future generations

The train-the-trainer model is key for capacity building in the Nigerian AECO sector – given it allows knowledge and skills to be rapidly and cost-effectively disseminated at a large scale, creating a sustainable, self-reliant training infrastructure.

Each participant from the workshop is expected to cascade their learning to colleagues in their institutions, creating a multiplying effect across Nigeria's TVET system.

After the workshop, many of the participants highlighted the importance of using their new knowledge and skills to help future generations of construction workers.

> Helen Ebikari Ebini, a basic technology subject teacher from Government Girls Secondary school, Rumueme, Rivers State, says *"To teach the young learners and expose them about what they will meet in future if they decide or are interested in technology."*

Transnational collaboration transforming technical construction education in Nigeria
STORY 4

The initiative also highlighted the urgent need to establish Centres of Excellence or Innovation Labs in Nigerian universities to sustain BIM adoption and skills development. Future priorities include capacity building for educators and professionals, upgrading infrastructure to support digital technologies, and policy frameworks encouraging BIM integration across higher education and government-funded projects.

Through this transnational collaboration, DT4TVET demonstrates how digital technologies can transform construction education, making it more effective, inclusive, and aligned with the needs of modern industry.

For Nigeria, it is a step toward a workforce capable of meeting the demands of Construction 4.0, improving employability, and strengthening the country's competitiveness on a global stage.

Importance of BIM for AECO Industry in Nigeria

- BIM reduces the high reliance on manual methods of construction which is error prone and leads to rework.
- It encourages inclusion and diversity, presenting a better opportunity for gender balance in the construction industry where female professionals can effectively participate in projects.
- It has the potential to revolutionise how construction skilled workers operate and deliver projects since they can visualise their tasks before getting to the site.
- In Nigeria where the rate of collaboration among construction professionals is low, BIM allows professionals to interface with each other to ensure the project is delivered to the satisfaction of clients.

Gribs Integrated Services Ltd provides engineering, construction, and project management training and services in Nigeria. It is an Autodesk Learning Partner and a training center under the National Skills Qualifications Framework (NSQF) for the training of Artisans and Craftsmen under construction trades. It offers a wide range of courses, including project management, and construction safety, as well as practical skills training in areas like electrical installation, masonry, and pipefitting.

GIS Gribs Integrated Services Ltd RC: 925048

www.gribsitegratedservices.com
https://www.linkedin.com/company/gribs-integrated-services-limited/