Introducing Blended Learning in Universities in West Africa

A summative evaluation of the Partnership for Blended and Enhanced Learning West Africa Programme. April 2024

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Executive Summary

Introduction

This report presents the results of an evaluation of the Partnership in Enhanced and Blended Learning West Africa Programme (PEBL-WA). The programme was implemented by the Association of Commonwealth Universities (ACU) working in partnership with Staff and Educational Development Association (SEDA), the Commonwealth of Learning (CoL), The National Open University of Nigeria (NOUN), and The Ghana Tertiary Education Commission (GTEC) and was funded by the Australian Department of Foreign Affairs and Trade (DFAT). Running from September 2021 to August 2024, the programme aimed to enhance educational capacities and foster regional collaboration among twelve universities in Ghana and Nigeria, focusing on the adoption and integration of blended learning (BL).

Programme background and context

PEBL-WA was designed to respond to the growing demand for higher education in West Africa by improving the pedagogical skills of university faculty in BL and supporting the development of quality assurance frameworks. The intended outcome was to *increase the flexibility of the higher education system to expand capacity and meet increasing graduate learning demands without compromising quality* through 5 specific outputs: 1) *Network of universities for sharing degree courses through blended learning;* 2) *Online platforms for sharing course materials*; 3) *Capacity to support pedagogical approaches for blended learning*; 4) *Strengthened QA systems for blended learning courses*; and 5) *High quality, credit-bearing BL courses included within traditional programmes.*

The programme worked with six partner universities in in both Ghana - Kwame Nkrumah University of Science and Technology (KNUST), Ashesi University, All Nations University (ANU), Kumasi Technical University (KTU), University of Energy and Natural Resources (UENR) and the University of Health and Allied Sciences (UHAS) and six in Nigeria - Alex Ekwueme Federal University Ndufu Alike (AE-FUNAI), First Technical University (Tech-U Ibadan), University of Lagos, University of Ibadan, Ebonyi State University and Ladoke Akintola University of Technology (LAUTECH).

The evaluation

Led by the International Network for Advancing Science and Policy (INASP), the evaluation used a collaborative and participatory approach, utilizing existing programme data complemented by new data collection through surveys and interviews and a series of stakeholder workshops at the end to co-analyse the results and co-formulate the conclusions and recommendations. The evaluation aimed to determine the extent of achievement towards the intended outcomes, the impact of the programme on the participating institutions and their teaching practices, and to generate lessons and recommendations for the ACU, the partner universities, the regulatory bodies and donors wishing to support similar initiatives.

Key achievements

Based on the evidence collected by the evaluation, participants in the workshops concluded that the programme significantly exceeded its expected outcome and outputs.

The programme had trained over 3,000 lecturers and 4,000 students in blended learning pedagogies, quality assurance, and the use of technological platforms.
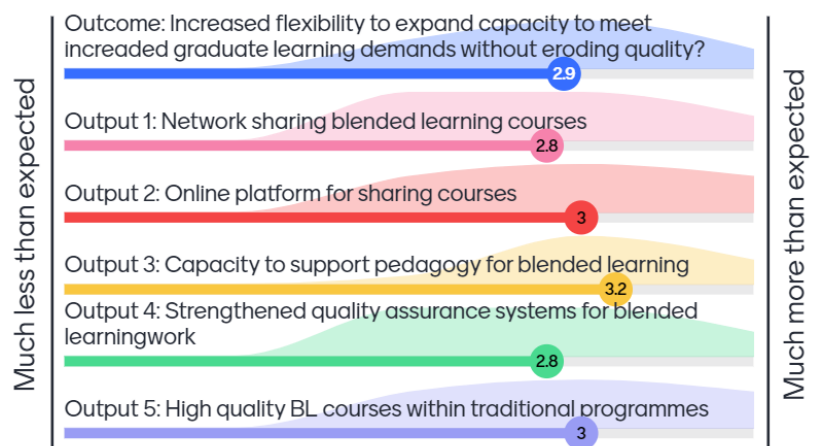
There were also clear improvements in institutional policies, practices and infrastructures which support the adoption of blended learning. This included the development of new blended learning strategies and quality assurance mechanisms to ensure that blended learning courses met high-quality standards and maintained educational integrity as capacities expanded.

In addition to these achievements there is also strong evidence of improved capacity in other universities in Ghana and Nigeria through training provided by partner university staff.

Nearly all (98%) of partner university staff surveyed said that PEBL had made a difference to their universities' ability to develop and deliver blended learning university survey. 6 (10%) said a small difference, 35 (60%) a significant difference, and 16 (27%) dramatic or transformative difference.

Most students surveyed (86%) scored the quality and usefulness of the course as excellent and that the interactive approach of blended learning encouraged active participation, is accessible from anywhere and very flexible.

Contribution

While workshop participants identified a number of enabling factors including a general shift to online learning in the universities accelerated by the COVID-19 pandemic, there is strong evidence that PEBL-WA's strategic interventions contributed significantly to the enhanced capabilities of faculties in delivering blended learning effectively, thereby improving the overall educational quality and expanding student reach without increasing physical infrastructure. Also to the establishment of policies and practices that foster adoption of blended learning in the universities and the creation of a network of universities in Nigeria and Ghana learning and sharing best practices.

Sustainability

The evaluation generated strong evidence that the changes observed in partner and non-partner universities will be sustained with universities embedding blended learning deeply into their operational frameworks. Key factors contributing to this include the continuous support and commitment from university administrations and governmental bodies; the development and implementation of supportive national policies by national regulators; and ongoing collaboration within the partner university network.

Conclusion - the big stories

Participants in the workshop identified five "big stories" emerging from the evaluation:

- **Blended learning is better for students, teachers, and universities:** it enhances student flexibility in scheduling and accessing materials, leading to a better work-life balance and increased motivation. For teachers, it reduces workload and stress by streamlining lesson delivery and incorporating interactive content, thus improving education quality. Universities benefit from a more dynamic and inclusive educational environment, enabling a diverse course offering and increased student numbers without compromising quality.

- **The PEBL-WA approach worked but it needs dedication and commitment:** the programme significantly enhanced course flexibility and quality, though it required substantial dedication and commitment by participants. Success involved managing regular duties alongside project demands, often during financial challenges like salary halts and increased data costs in Nigeria. However, thorough training and strong leadership helped sustain morale and commitment.

- **It has led to changes in capacity, practice, and policy:** PEBL-WA has transformed educational practices, capabilities, and policies, fostering a culture of digital education. This approach not only improved online learning facilitation but also influenced the development of blended learning policies, making interactive and multimedia teaching standard practice. This has led to policy changes requiring faculty to develop modules in blended formats, promoting adaptability and innovation.

- **PEBL-WA is sustainable and replicable**: the programme's impact is likely to be sustainable and replicable, evidenced by increased productivity and adoption of blended learning policies, such as at AE-FUNAI in Nigeria. Overcoming infrastructure challenges has been possible due to high motivation and institutional support. This approach has set a replicable model for regions like Ghana and Nigeria, aiming to make blended learning a core aspect of their educational systems.

- **National regulators need to be involved for replication and sustainability:** involving national regulators is crucial for the sustainability and replication of blended learning in Nigeria and Ghana. Policies need to set BL adoption thresholds and create accreditation models distinct from traditional programs. Collaborative discussions between universities and regulators will help define support mechanisms and establish metrics for evaluating blended learning programs, ensuring alignment with national educational standards and goals.

Recommendations

Participants in the final summit workshop generated the following recommendations from the evaluation for each of the key evaluation users.

ACU should:

1. Do more desk research to understand the local context before planning projects – to enable better selection of and dialogue with university partners and regulatory authorities.
2. Involve regulators early at design stage - to identify how best to support and work with them, for example with the NUC who already have a policy to promote blended learning in Nigeria.
3. Continue to support the PEBL-WA network with training and knowledge sharing activities –to bring all up to the same level so they can then help others.
4. Evaluate the impact on universities which have implemented BL - to identify and champion best practice and generate evidence to support wider uptake nationally and internationally.
5. Co-design activities with university partners - to understand and be able to provide a flexible package of support for their individual challenges and contexts.
6. Work with IT partners – especially national internet service providers to address infrastructure issues in universities and global players to identify and capitalise on new technology including AI tools.

Partner Universities should

1. Advocate for the integration of supportive policies, incentives for lecturers and institutional support to integrate BL training and workshops throughout the curriculum within partner universities.
2. Conduct and assessment of infrastructure requirements for BL implementation so they can advise other universities on what is required and good procurement practices.
3. Develop and use an evaluation framework for assessing the effectiveness of BL to generate evidence of its effectiveness and advocate for national policies on BL in West Africa.
4. Develop a platform for partner universities to be able to continue to collaborate, share experiences, and exchange knowledge.
5. Continue to work together to identify areas for improvement, avoid mistakes and showcase the benefits of BL to students.

Regulatory authorities should:

1. Promote partnerships and collaborations among the different stakeholders involved in promoting BL.
2. Continue to develop and implement comprehensive national policies and guidelines for blended learning (BL).
3. Organise policy dialogues involving all relevant stakeholders to facilitate the sharing of best practices and frameworks between institutions and support BL capacity building initiatives for universities and other educational institutions.
4. Do more work on institutional and pedagogical QA and embed learner support mechanisms within the programme accreditation process.
5. Collaborate with regulatory authorities in other countries to share experiences and lessons.

DFAT and other donors should:

1. Develop a detailed understanding of the local context before planning projects.
2. Strengthen existing initiatives rather than starting new ones.
3. Provide longer term flexible funding including additional resources for existing projects if new needs or opportunities emerge.
4. Allow time to evaluate the long-term impact of policies and programmes before looking for something new.

Acronyms and Abbreviations

ACU	Association of Commonwealth Universities
AEFUNAI	Alex Ekwueme Federal University Ndufu Alike
ANU	All Nations University
BL	Blended Learning
CD	Capacity Development
CoL	Commonwealth of Learning
COR	Collaborative Outcomes Reporting
DFAT	Australian Department of Foreign Affairs and Trade
ESU	Ebonyi State University
FUNAAB	Federal University of Agriculture Abeokuta
GTEC	Ghana Tertiary Education Commission
HEI	Higher Education Institutions
IBADAN	University of Ibadan
ICT	Information and Communication Technology
INASP	International Network for Advancing Science and Policy
KNUST	Kwame Nkrumah University of Science and Technology
KsTU	Kumasi Technical University
LAUTECH	Ladoke Akintola University of Technology
LMS	Learning Management System
NOUN	National Open University of Nigeria
NUC	Nigeria University Commission
OER	Online Educational Resources Africa
PEBL-WA	Partnership in Enhanced and Blended Learning West Africa Programme
QA	Quality assurance
RFP	Request for Proposals
SEDA	Staff and Educational Development Association
SoC	Stories of change
TECHU	First Technical University, Ibadan
TOC	Theory of Change
UENR	University of Energy and Natural Resources
UHAS	University of Health and Allied Sciences
UNIJOS	University of Jos
UNILAG	University of Lagos
VLE	Virtual Learning Environment

1. Introduction

This report presents the results of a summative evaluation of the Association of Commonwealth Universities (ACU) Partnership in Enhanced and Blended Learning West Africa Programme (PEBL-WA). The evaluation was undertaken between November 2023 and April 2024 by the International Network for Advancing Science and Policy (INASP).

The remainder of this report is organised in the following sections:

- Section 2: Background – programme context approach, evolution and Theory of Change (ToC).
- Section 3: The evaluation - purpose, objectives, users, evaluation questions and methods.
- Section 4: Key findings – for each of the evaluation questions.
- Section 5: Lessons and recommendations.

Additional information is provided in the following Annexes:

- Annex 1: PEBL-WA Programme Design and Theory of Change.
- Annex 2: Key evidence collected during the evaluation.
- Annex 3: The evaluation approach and Evaluation Plan.
- Annex 4: The evaluation terms of reference.

2. Background

The PEBL-WA West Africa programme ran from September 2021 to August 2024 with funding from the Australian Department of Foreign Affairs and Trade (DFAT). PEBL WA was led by the Association of Commonwealth Universities (ACU) working in partnership with Staff and Educational Development Association (SEDA), the Commonwealth of Learning (CoL), The National Open University of Nigeria (NOUN), and The Ghana Tertiary Education Commission (GTEC)

The programme has supported the educational development capacity of academic teaching staff in six partner universities in each of Ghana and Nigeria by providing training on pedagogy, quality assurance (QA) and technological platforms for blended learning (BL) so they could expand the range of courses offered to undergraduate and postgraduate students. The programme was also designed to enhance regional collaboration and teaching quality by enabling the exchange of knowledge and learnings between universities across the region. The partner universities were:

In Ghana:
- Kwame Nkrumah University of Science and Technology (KNUST)
- Ashesi University
- All Nations University (ANU)
- Kumasi Technical University (KTU)
- University of Energy and Natural Resources (UENR)
- University of Health and Allied Sciences (UHAS)

In Nigeria:
- Alex Ekwueme Federal University Ndufu Alike (AE-FUNAI)
- First Technical University (Tech-U Ibadan)
- University of Lagos
- University of Ibadan
- Ebonyi State University
- Ladoke Akintola University of Technology (LAUTECH)

A fuller description of the PEBL-WA programme is included in Annex 1.

3. The evaluation

The evaluation used a collaborative participatory approach which makes as much use as possible of existing programme data, collects additional information using participatory approaches, and co-analyses the conclusions and recommendations through a series of workshops involving representatives of all stakeholder groups.

Following initial discussions between INASP and the ACU, the approach was developed further during and after a meeting of the PEBL-WA university leads in Lagos in November 2023. The emerging evaluation plan was then discussed further in an online meeting with ACU and with representatives of two of the partner universities in early December.

A brief summary of the evaluation purpose, users, evaluation questions and approach is provided below. More detail on the approach and the evaluation plan is attached as Annex 3.

Purpose, objectives and users

The central purpose of the PEBL West Africa summative evaluation is to find out to what extent the intended outcome "Increased flexibility in West African Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality" has been achieved.

The evaluation has 5 specific objectives:

1. To assess achievement of the programme toward meeting expected results, based on the TOC.
2. To identify the extent to which the programme contributed to enhancing capacity of participating universities to implement and improve BL provision.
3. To identify the extent to which the PEBL-WA university network established by the programme improved the overall and University specific BL provision.
4. To evaluate the impact/change in partner universities and how the programme has contributed to these changes (development of policies, institutionalization of capacity building activities, etc.)
5. To draw lessons that inform future programming and assess accountability status for further learning.

The RFP also stated that the evaluation should be undertaken in line with the local context and will encourage active participation of relevant members of staff and students in the 12 partner universities.

The RFP identified the evaluation users as the ACU, PEBL WA partner universities, DFAT and other external stakeholders but didn't describe how they might use the results. Discussions in the Lagos meeting in November 2023 at the start of the evaluation refined this list and identified the following uses:

Users	Uses
ACU	- To inform future programme design. - To be able to demonstrate that it's a good investment. - To be able to compare this with other approaches and investments. - To inform advocacy activities.
PEBL WA Partner Universities	- To identify and learn about good practices. - To inform the development of policies, benchmark progress and QA. - To identify approaches for sustainability. - To position partner university staff for consultancy opportunities to assist other universities.
Regulatory Authorities. Industry,	- To provide evidence about how to strengthen blended learning in universities. - To identify experts in blended learning that they can draw on to replicate successful approaches. - To inform the development of policies to support blended learning. - To highlight the need to invest.
DFAT and other donors	- To provide evidence about how to strengthen blended learning in universities. - To identify opportunities, mechanisms and funding needs to support blended learning. - To be able to demonstrate that it's a good investment.

The Theory of Change and assumptions

The starting point for a performance story is the ToC. The existing PEBL-WA ToC was reviewed in the Lagos workshop and modified slightly to reflect early realisations during implementation that:

- A programme working with only 6 universities in Nigeria and 6 universities in Ghana was unlikely to have a major impact on "West African Higher Education systems", so the purpose statement was modified to focus on higher education systems in Ghana and Nigeria.

- The course approval process in West Africa takes a long time and it was unrealistic to expect the universities to be able to share approved credit-bearing courses, so Output 1 was modified to focus on universities sharing knowledge and expertise of blended learning rather than courses.

- Most universities already had and were using Learning Management Systems and didn't need to develop new ones, so the focus of Output 2 was on staff posting courses on their own and the Online Educational Resources (OER) Africa platforms.

This modified ToC is included in Annex 1.

While the original PEBL-WA proposal to DFAT included the ToC it didn't include any assumptions or risks. A discussion in the Lagos workshop identified the following assumptions:

- Regulatory bodies will support blending learning (eg the Nigeria University Commission (NUC) inclusion of BL in Core Curriculum Minimum Academic Standard, nothing yet equivalent in Ghana).

- The approach and expected results will be affected by the country context.

- Partner university management willing to adopt and replicate PEBL initiatives and have the resources.

- Teaching staff are willing and incentivised to adopt blended learning.

- Students are able to access and use online learning materials.

The evaluation questions

The evaluation questions proposed by INASP in its response to the RFP were modified following the Lagos meeting, and during the early stages of the evaluation. The final evaluation questions were:

1. What is the evidence that there is "Increased flexibility in Nigerian and Ghanaian Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality"?
   - How and how much did PEBL WA contribute to this.
   - What were the other enablers?
   - What were the challenges?
   - What was the process of implementation (stories about process as well as outcome)?
   - How were the regulatory authorities involved (in implementation and outcome)?
   - How sustainable are the changes?

2. What is the evidence that the expected activities and outputs were delivered?
   - What was the process?
   - How and how much did they contribute to the outcome?
   - What were the challenges?
   - Were the assumptions correct?
   - What additional outputs were delivered (e.g. training non-partner universities)?

3. Did the programme work as expected?
   - Did the ToC work?
   - Were the assumptions correct?

4. What lessons can be derived from the evaluation to inform future programming?
   - What will the challenges be?
   - What contribution by regulatory authorities and other organisations need to be involved, what is the best process.

Approach and methods

The key stages and approaches of the evaluation were as follows:

1. Scoping and inception: preparatory work and sessions in the Lagos meeting to confirm the ToC, refine the evaluation questions; identify existing data and any gaps and finalise the methods, process, and timeline etc.
2. Data trawl: reviewing existing programme reports and data. A full list of programme documents reviewed is included in Annex 3.
3. Social inquiry (i.e. new data collection) through E-mail; Online surveys, Online or phone interviews and Stories of change (SoC).
4. Data analysis and integration: the key tool used for data analysis and integration in a performance story is the results chart. It is essentially a table based on the evaluation questions which aggregates different elements of evidence to support a statement about what has been achieved vs what was planned at each level of the ToC.
5. A series of online workshops to validate the data, co-analyse the results and co-produce the conclusions and recommendations:
   - A data validation workshop to review the emerging results chart, validate the key findings and identify any evidence gaps.
   - A co-analysis and co-production workshop to review the emerging results chart and identify the "big stories" that are emerging from the evaluation.
   - A final summit workshop involving representatives of all programme stakeholder groups to present, discuss and validate the key conclusions and recommendations.

The INASP team managed all evaluation activities working closely with the PEBL WA university leads. ACU staff and one lead from a partner university in each of Ghana and Nigeria met periodically to review progress. A timetable for the whole evaluation is included in Annex 3.

Contributors

The key contributors to the evaluation and their roles were as follows:

INASP:
- John Young: Team leader
- Funmilayo Doherty: Research team manager.
- Alade Amos: Researcher, Nigeria
- Idowu Aneyo: Researcher, Nigeria
- Kojo Ahiakpa: Researcher, Ghana

ACU:
- Fiona Khandoker: ACU PEBL Programme Manager (until December 2023).
- Pat Onoapoi: ACU PEBL Programme Manager (from December 2023).
- Beate Knight: ACU Head of Programmes.

Implementation Partners:
- Edmund Aalangdong, GTEC, Ghana
- Monioluwa Olaniyi, NOUN, Nigeria
- Jane-Frances Agbu, CoL
- Ruth Brown, SEDA

PEBL Partner Universities, Nigeria:
- Chukwunonso Ejike, PEBL Lead AE-FUNAI
- Eugene Ndubuisi Nweke, PEBL Lead Ebonyi State University
- Adedoyin Adenike Aguoro, PEBL Lead University of Ibadan
- Timothy Ipoola Olabiyi, PEBL Lead LAUTECH,
- Adesola Ajayi, PEBL Lead First Technical, Ibadan
- Sunday Adebisi, PEBL Lead, UNILAG

PEBL Partner Universities, Ghana:
- Carlene Kyeremeh, PEBL Lead, All Nations University
- Eric Appau Asante, PEBL Lead, KNUST
- Benjamin Asubam Weyori, PEBL Lead, University of Energy and Natural Resources.
- Harry Tagbor, PEBL Lead, University of Health and Allied Sciences.
- Angela Owusu Ansah, PEBL Lead, Ashesi University
- Mike Agbesi Acheampong, PEBL Lead, Kumasi Technical University

In addition to this, 10 staff from partner and non-partner universities wrote SoC, 10 partner leads, 8 implementation partner staff, 38 lecturers and 16 students from partner and non-partner universities were interviewed, and 57 staff and 17 students completed an online survey,

4. Achievements

Overall estimates

PEBL Programme partner university leads were asked in the Lagos meeting to assess the programmes' overall achievement against its outcome and outputs in a mentimeter poll with a scale from 0 = much less than expected to 3 = much more than expected. The results were as follows:
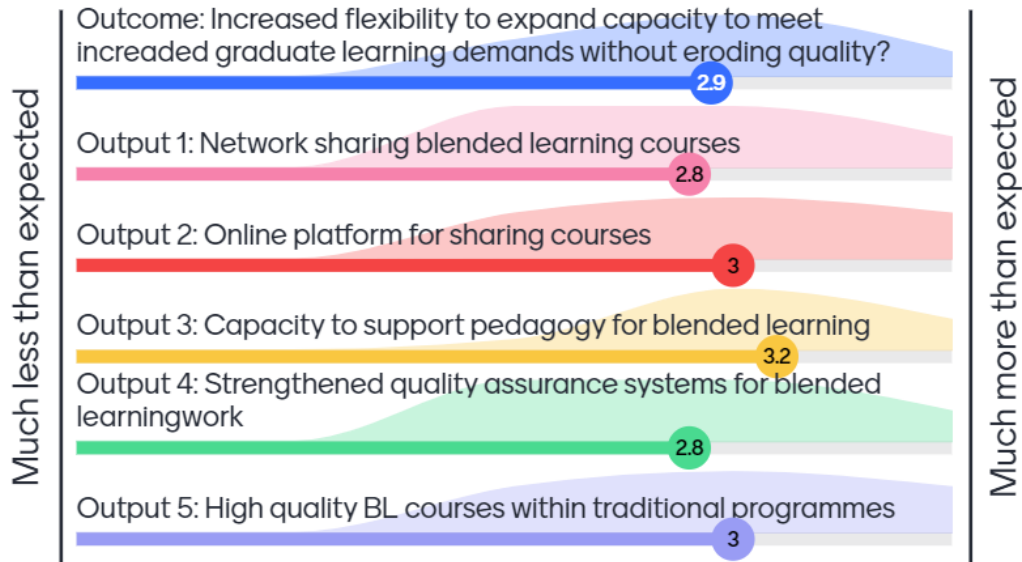
Exactly the same exercise was undertaken at the Co-Analysis Workshop with a much wider range of stakeholders including implementation partners, PEBL partner programme leads, and other lecturers and students from partner and non-partner universities. Most of them had also attended the previous data-validation workshop where they had reviewed the evidence collected by the evaluation. The results were as follows:
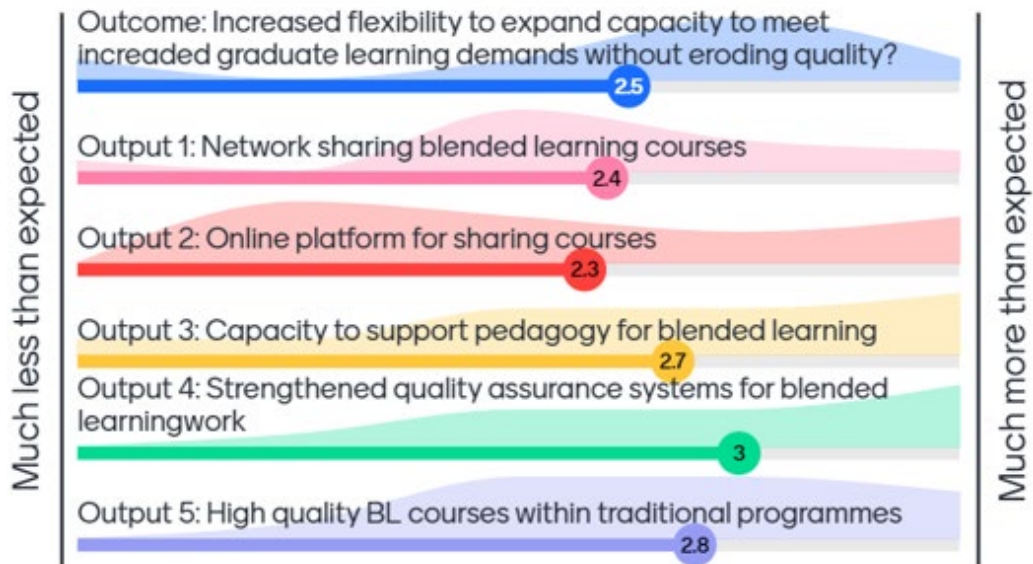
While quite similar, the fact that most, except for strengthened quality assurance mechanisms, were slightly lower with the wider group suggests that they are based on the evidence rather than just the impressions of the university leads.

More detailed evidence of achievement towards the outcome and outputs, how much PEBL-WA contributed to them and their likely sustainability is provided in the following sections of this chapter.

Outcome: Increased flexibility in Nigerian and Ghanaian Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality?

There is strong evidence that there is increased flexibility and expanded capacity to deliver high quality blended learning in all 12 partner universities and some non-partner universities in Nigeria and Ghana which will help them to expand their capacity to meet increasing graduate learning demands without eroding quality.

The log frame indicators at outcome level were as follows: 1) All 12 partner universities have expanded capacity to incorporate blended learning courses into their academic planning; 2) 7 reforms supported by PEBL WA in partner universities have taken place; 3) 36 staff in partner universities trained by SEDA, 329 trained by NOUN, 1,000 staff trained by cascade training in partner universities; 4) 12 blended courses (1 in each partner university) meet agreed quality benchmarks; and 5) X reform processes at the national or regional level supported or inspired by PEBL WA which have led to institutional change at that level.

PEBL reports show that the programme has substantially exceeded most of its log-frame indicators at outcome level. All 12 partner universities have greater capacity to develop and deliver blended learning and are developing and already implementing reforms - 30% on online blended learning, 20% on blended learning strategy and 40% have upgraded IT infrastructure. SEDA trained 36 staff from the partner universities through online and face-to-face courses. They then trained 935 colleagues. NOUN trained 329 academics and 35 non-academics in blended learning, the use of a learning management system (LMS) and positing courses of whom 92 were trained as trainers and went on to train over 1,000 colleagues. CoL trained 65 staff on the QA rubric, QA assessment and the QA Institutional Review Tool. Overall, over 3,000 lecturers and 4,000 students have been trained in the production, posting, delivery and use of blended learning. All 12 partner universities developed and posted blended learning courses on OER Africa.

Implementation partner interviews confirmed this, but all felt there has been less progress with national and regional reform processes. Despite many interactions by all of the implementation partners, the programme found it difficult to engage the interest of the NUC. The programme had more success with GTEC which joined the programme as an implementing partner, did a comprehensive review of blended and distance learning policies in Ghana and is developing a national policy.

Programme leads from the partner universities identified a wide range of changes in their institutions contributing to this including attitudinal changes, enhanced capacity of lecturers and students, policy changes and improved infrastructure.

Their stories of change illustrate the attitudinal change: *"There was a noticeable yearning among academic and professional community members to fill the knowledge gap in technology and pedagogy. The programme ignited a thirst for continuous learning and improvement."* (Partner University, Nigeria, Male); improved personal capacity *"After the training, I can generate content for the courses I teach. I have been able to minimize my face-to-face encounters with my students. I have provided more content on their course pages and developed videos and other materials that make it easy for self-learning."* (Non-Partner University, Ghana, Male); and hint at wider change: *"As we plan to incorporate blended learning …. the insights gained from this training will undoubtedly play a pivotal role in the successful implementation of our vision* (Non-Partner University, Ghana, Female).

57 out of 58 (98%) of partner university staff who responded to the survey said that PEBL had made a difference to their universities' ability to develop and deliver blended learning university survey. 6 (10%) said a small difference, 35 (60%) a significant difference, and 16 (27%) dramatic or transformative difference. There was little difference by country or by level of role, but more women (47%) than men (22%) said dramatic or transformative, as did more management (50%) and support staff (40%) than academic staff (23%). All university staff interviewed in both Nigeria and Ghana also felt that the ability to deliver blended learning had increased: *"Almost every school now embraced blended learning. Everyone's eyes have been opened to the usefulness, importance of blended learning. So, let me say blended learning has come to stay. Currently, we have a blended learning*

committee already (Lecturer, Partner University, Nigeria, Female) and *"'We have transitioned to online teaching, and it is mandatory for lecturers to upload their lessons onto the Moodle platform and deliver the course through it''.* (Lecturer, Partner University, Ghana, Female).

Students also observed a change towards more online learning. All 8 students interviewed from 5 universities in Ghana reported that their universities were expanding BL capacity: *"Three of my courses were taught using the blended learning approach. Some of the specific courses are Credit Management, Research Methods and Rural Banking and Microfinance. I had some face-to-face and other parts in online learning"* (Student, Male, Ghana) and that they were more flexible and accessible: *"It has helped me in participating in my courses. And it was also really accessible so you can actually stay in the comfort of your home and then do your studies".* (Student, Female, Ghana).

Output 1: Networks of universities in and between Nigeria and Ghana sharing knowledge and experience of blended learning

The log frame indicators for Output 1 were: 12 Higher Education Institutions (HEI) delivering blended learning from other institutions; 7 HEIs developing and/or implementing policies on blended learning. The first was achieved, the second exceeded.

The plan envisaged recruiting 12 universities which were all selected and passed a due diligence assessment, and a survey of capacity development (CD) needs among university partners was completed in Year 1. Skills development and community building were identified as major needs in the CD survey and have been delivered in the training programme (see below). The quarterly steering committee members and occasional independent advisory board meetings to discuss "big picture issues" helped strengthen relationships between the partner universities.

While the partner universities have established a strong network and have been sharing knowledge and experience of blended learning, due to strict course approval processes in Nigeria and Ghana it was recognised early on that it would not be possible within the programme time-frame for the universities to use each-other's courses so the first log frame indicator is no longer relevant.

Implementation partners felt that the approach to programme implementation has encouraged sharing of knowledge and experience between partner and also non-partner universities. The structure of the face-to-face training in Abuja allowed lots of time for informal interactions between participants which *"helped to build commitment to the approach and build the community"*; and *"inviting universities around Abuja to send participants to the final 2 days of the Abuja course which provided an opportunity for the PEBL participants to practice what they had learned and also strengthen links with non-partner universities"*. (Implementation Partner, Female).

University leads provided many examples of changes in policy to support blended learning: *"as a result of the awareness we have a policy now, and a policy formulation committee..."* (Partner University Lead, Ghana, Male); *"The Senate approved the BL policy and made BL an official way of teaching alongside in-person"* (Partner University Lead, Nigeria, Male).

9 out of 10 (90%) also mentioned they have been sharing knowledge and experience of BL e.g.: *"We acted as trainers, many benefited from KSTU, others are learning from us. We train others….. We offered additional support to other partner universities..."* (Lecturer, Partner University, Ghana, Male); *"We are receiving mentorship from LAUTECH and one university in Ghana KsTU, on our online system."* (Lecturer, Non-Partner University Nigeria, Male); *"We collaborate with LAUTECH and FUNAI to train other universities like Covenant university, Federal University of Agriculture Abeokuta (FUNAAB), University of Jos (UNIJOS)"* (Lecturer, Non-Partner University, Nigeria, Male).

Most of the lecturers from partner and non-partner universities interviewed in Ghana and Nigeria cited new policies and upgrading their IT and internet infrastructure e.g.: "*Previously, the university's policy mandated a minimum of 30% online training for both staff and students. However, we are now aiming to increase that to approximately 50% per our new BL policy*" (Lecturer, Partner university Ghana, Female), "*We recently opened an Information and Communication Technology (ICT) information centre, which was established through a partnership with the Korean government*" (Lecturer, Partner University Ghana, male); "*we are currently developing eLearning policy for the institution*" (Lecturer, Non-Partner University, Nigeria, Male)

Output 2: Staff in partner universities trained and posting courses on OER Africa

The log frame indicators for Output 2 were: 329 academics trained on the use of technological platforms for sharing courses; 2 Students' satisfaction with the use of LMS - 90%; 3 Students' perceived confidence with the use of LMS - 75%; Academics' satisfaction with the use of technological platforms 75%; Academics' perceived confidence with the use of technological platforms (75%). These have all been achieved or exceeded.

PEBL's own reports indicate that the programme has comfortably exceeded its log-frame targets for training staff in partner universities to produce and use their university LMSs to make blended learning materials available to their students. NOUN trained 228 staff from 11 partner institutions (the University of Lagos did not participate) and 101 attended the follow up training. The 9 universities which qualified and met the threshold of being skilled enough to cascade training went on to train over 4,000 students in their institutions.

University leads interviewed also described the wide range and depth of training delivered in their universities and indicated that 15 courses had been posted on OER Africa - 6 by Nigerian universities and 9 courses by Ghanaian universities (ANU alone posted 4 courses).

All of the stories of change submitted by partner universities emphasise the scale and quality of the training. One story from Ghana described how 4 staff were trained in repurposing the current face-to-face curriculum who then trained 34 other faculty members with nine courses repurposed into blended learning mode; 4 staff who were trained on the Online Management System trained 260 other staff (188 males and 72 females) and 1,055 students (624 males and 431 females). One story from Nigeria said of the training that *"this awareness laid the groundwork for a paradigm shift in the way teaching and learning were perceived at the institution";* one from Ghana that *"the online workshop in February proved particularly insightful. I learned to enhance course learning outcomes with effective activities for engagement and assessment tasks"* and another from Ghana that *"the DBL4 programme has not only advanced my teaching methodologies but has significantly contributed to my career development".*

83% of lecturers surveyed by PEBL-WA in 2022 were either 'satisfied' or 'very satisfied' with the trainings and over 91% said they had been able to put their training into practice, with very little difference between men and women, country, role or job level. Of those: 18 (37%) said they had delivered online lectures and assessments, 12 (25%) said they were using the LMS, 12 (25%) said they were training other staff, and 8 (13%) said they had repurposed courses.

50 out of 58 (86%) of the staff who responded to the university staff survey said they had received training from PEBL of which 41 (82%) had received training in producing blended learning materials, 43 (86%) on using the LMS, 32 (64%) on posting materials, 28 (56%) on using QA materials, and 34 (68%) on approaches to institutionalising blended learning. 48 (91%) received online training, 31 (58%) face-to-face training, and 22 (42%) through the provision of training materials. There was no significant difference between men and women. All said the training was good, with 28 (53%) rating it excellent, 23 (43%) as very good and 2 (4%) as good. There was very little difference between the number of men, between Nigeria and Ghana or between role and job level.

11 (90%) out of 12 lecturers from partner universities in Ghana interviewed said they use the Moodle learning management system e.g.: *"We have transitioned to* online *teaching, and it is mandatory for lecturers to upload their lectures onto the Moodle platform and deliver the course through it".* (Lecturer, Partner University, Ghana, Female*)*. Other comments included: *"This semester alone we have trained 400 faculty members".* (Lecturer, Partner University Ghana, Male); *"The PEBL training has enhanced their ability to develop and deliver high quality online and blended material"* (Lecturer, non-partner university, Male), *"I have been able to repurpose my materials for both online and blended learning settings"* (Lecturer, Partner University, Ghana, Female), another that *"As part of our pilot programme, we have implemented a two-week virtual teaching period followed by two weeks of in-person lesson delivery"* (Lecturer, Partner University, Ghana, Female). But one also said *"I have developed learning resources for my classes. However, due to work constraints, I have not been able to upload them to the LMS"* (Lecturer, Partner University, Ghana, Female).

11 of the 17 students who responded to the survey (65%) said they had received some training in accessing blended learning. The most frequent types of training mentioned were the use of online platforms (6), how to use the online materials (2) and on how people learn (2).

All students interviewed in Nigeria (100%) had received some training relating to the LMS and online learning management, and some trained students from partner universities in Ghana went on to train other students. 7 out of 8 students from partner universities interviewed in Ghana reported satisfaction with training quality and that it had increased their willingness and ability to use LMS. One male student said *"The world is going increasingly digital. It's no longer necessary to solely rely on physical classroom interactions with lecturers to learn"* (Student, Partner University, Ghana, Female), another that *"This approach is really good. I'm starting my master's degree on campus. If this approach is applied in our teaching and learning, I think it will be good"*. (Student, Partner University, Ghana, Male),

As well as the planned training in partner universities, and partly because of spare resources as a result of some universities' inability to implement the cascade training due to capacity challenges or strikes, staff from 7 of the partner universities have trained a further 102 staff in 12 non-partner universities.

A further unexpected benefit mentioned by the implementation partners was that the influencing influencers workshops organised after the SEDA training in Abuja had *"both raised the profile of the trainers as well as strengthening interest in blended learning across the universities"* (Implementation Partner, Female).

Output 3: Increased capacity to support pedagogical approaches for blended learning

The log-frame indicators for Output 3 were: Number of academics with enhanced capacity to support educational development [with disaggregation by gender and country]; 2 Number of Higher Education Institutions that that have institutionalised capacity strengthening in blended learning pedagogy (disaggregated by institution and country); 3: Number of individuals with enhanced capacity to teach blended learning courses [with disaggregation by gender and country]

As reported above there is much evidence of the volume type and approach to training delivered by PEBL. We will focus here on evidence that staff have increased pedagogical skills and on institutionalisation of capacity to deliver BL.

36 staff (3 from each university) received online training in developing blended learning from SEDA in November 2021. 92% of respondents. were either 'satisfied' or 'very satisfied'. Feedback included *" I have learnt to develop a course module, design and use e-tivities, improved my use of technology in teaching, improved my level engagement with my students and colleagues, improved my overall professional output as a lecturer'* (ACU Progress Report). 30 of them then had face-to-face training in Abuja in July 2021, and went on to train nearly 1,000 colleagues over the next year.

Interviews with university partner leads indicated several measures that have been put into place in their universities to institutionalise blended learning. They include blended learning policies *"We have a blended learning policy, online content must not be less than 30%."* (University Lead, Nigeria, Male), policy implementation: *"The university senate approved it and that led to the decision on 100L students to be taught online and also buying of millions of naira worth of gadgets"* (University Lead, Nigeria, Male), improved structures: e.g.: *"BL unit established now, with coordinators and team that train other staff".(*University Lead, Nigeria, Male) and incentives for staff e.g.: Incentive for promotion*: "So we use as research incentive and count toward promotion as incentive"*(University Lead, Ghana, Female) *"We give awards to staff who use the BL approach"*.(University Lead, Ghana, Male).

Many of the SoC submitted by partner universities in Ghana describe the quality and range of pedagogical training provided e.g. *"The adoption of constructivism and phenomenography from DBL4 transformed my teaching approach, making classes more engaging and interactive. Encouraging students to reflect on their experiences and connect them with theoretical concepts has become a regular practice", "The course took about nine months to complete... it focused on pedagogy and practical aspects of course design and training on how to repurpose current course modules..." and*

"the NOUN training focused on content delivery via the Virtual Learning Environment (VLE) / Learning Management System (LMS)" (Partner University, Ghana, Male). They also describe the engagement of senior university staff, improved internet infrastructure, the establishment of a help desk to provide technical and related assistance for staff and students, and the development of a Blended Learning Guideline for the university which has been approved by the University Council.

As above it is not surprising that PEBL leads and their SoC are positive, and this picture is corroborated by evidence from the university lecturers survey.

All interviewees from the partner universities in Nigeria rated the quality of the training as good. 64% (7 of 11) found the training on LMS, online assessment and student engagement useful, 45% (5 of 11) felt it had improved the use of blended learning in their institution, 27% (3 of 11) reported its adoption *"due to its flexibility and cost effectiveness"*, 36% (4 of 11) also valued the introduction of design thinking, but 28% (3 of 11) mentioned improved preparation and ability to operate the Learning Management System (LMS) following the PEBL training.

Even interviewees in non-partner institutions in Nigeria agreed that the training received from PEBL-WA has made an impact on their ability to develop and deliver quality online and blended learning materials: 80% (4 of 5) reported incorporation or implementation of the blended learning approach into their teaching, 60% (3 of 5) stated that all aspects of the training were useful and 1 (20%) reported cascaded training in their institution following the training (Non-Partner Lecturer, Nigeria, Male).

Interviews with lecturers in 3 out of the 6 partner universities in Ghana said they are leveraging partnerships to cascade BL capacity building, specifically focused on training additional staffs at affiliated schools.

Responses from the 8 students in Ghana also indicate that staff are switching to BL courses. 7 revealed that they are already enrolled in courses delivered through BL after training. E.g. *"Yes, I'm already taking courses using BL…. it was really accessible so you can actually stay in the comfort of your home and then do your studies"*. (Student, Partner University, Ghana, Female) and *"3 of my courses were taught using the BL approach"* (Student, Partner University, Ghana, Male) and others described the establishment of dedicated e-learning centres, free Wi-Fi access on campus and data packages for students outside campus *"The university provides students with monthly data bundles (to) those off-campus and a free Wi-Fi on campus. Also, you can use the computer lab or go to the e-learning centre if the network is bad"*. (Student, Partner university, Ghana, Female).

6 out of 8 students from partner universities in Ghana rated the PEBL programme's contributions positively in their studies. E.g. *"I realised that my grades got better, and it also became more personalised learning through BL"*. (Student, partner university, Ghana,Male).

Output 4: Strengthened QA systems for blended learning courses

The log-frame indicators for Output 4 were: 1) Number of action plans being developed [with disaggregation by university and country] (12); 2) Number of Higher Education Institutions applying QA Rubric to blended learning modules [with disaggregation by university and country] (12); and 3) Higher Education regulatory partners will review policies on blended learning and will be supported to develop/refine policies to take into account PEBL WA learnings.

The PEBL-WA plan envisaged that staff in all 12 partner institutions would be trained in QA. By mid-2023 the COL trained 56 staff in "QA in Blended learning" course (20 received certificates) and "QA in Higher Education in Africa" course (11 received certificates) + courses on the institutional QA tool and QA rubric, and 10 of the 12 universities have developed QA improvement action plans.

This was corroborated by lecturers interviewed from the 6 partner universities in Ghana, 5 of whom said they have developed Quality Assurance improvement action plans including e.g. *"Our internal QA is very robust and there are always updates. They have to approve the newly redesigned courses for BL before we can upload them to the KNUST virtual classroom"*. (Lecturer, Partner University Ghana, Female). 7 out of the 10 lecturers interviewed from non-partner universities in Ghana said internal QA had been introduced in their universities e.g. *"Lecturers must register their presence*

online by delivering lectures, uploading notes, and meeting other requirements". (Lecturer, Non-Partner University, Ghana, Male). But 6 out of 12 partner lecturers in Ghana however indicated their repurposed courses are yet to be approved by the quality assurance units of their universities as did 5 out of 10 non-partner lecturers.

Output 5: High-quality, credit-bearing BL courses included within traditional programmes

The log-frame indicators for Output 5 were: 1) Number of Higher Education Institution departments adopting blended learning model [with disaggregation by country and university]; 2) Number of quality-assured, credit-bearing courses offered through blended learning [with disaggregation by university and country] (12); and 3) Number of students taking quality-assured, credit-bearing blended learning courses [with disaggregation by gender, institution and country.

The plan envisaged 12 courses would be posted on OER Africa, but by the end 15 had been developed and launched by mid-2023 "but only for their own use. It is unlikely that universities will be able to get formal approval to teach each other's courses and offer credits for it" (PEBL Report 2023).

It is not possible to accurately quantify the number of departments adopting them, nor the number of blended courses being delivered over and above the 15 posted on OER Africa mentioned above. But there is much qualitative evidence.

15 of the 17 (88%) students who responded to the student survey had attended blended learning courses with no significant difference by gender or country. They had come from 12 different departments. All of them felt the courses had met their learning needs.

All of the 10 PEBL partner university leads interviewed said their institutions have adopted blended learning model e.g.: *"BL is now being recognised as a mode of teaching and learning in this university" (*University Lead, Ghana, Male)*, "[A] good number of departments have developed their courses as BL" (Nigeria, Male), "We expect that 2/3 of our course will go on BL"* (University Lead, Nigeria, Male).

All 12 lecturers interviewed from the partner universities in Ghana said their institutions have adopted BL with 4 universities approving repurposed course modules. 8 out of the 12 (75%) said they have completed repurposing some of their courses for e.g. *"I have been able to repurpose my materials for both online and blended learning settings"* (Lecturer, Partner University, Ghana, Female) and based on 8 of the interviews (75%) approximately 1,500 students are enrolled in credit-bearing BL courses that have gone through the QA process, *"I would say 2,000 students as I teach seven courses per semester"*. (Lecturer, Partner University, Ghana, Male).

15 out of 17 student responses to the student survey (88%) had attended blended learning sessions and most (86%) scored the quality and usefulness of the course as excellent, with no difference by country or gender. The most frequent advantages of blended learning mentioned by students included that: it encouraged active participation (6), it is accessible from anywhere (6), it is flexible (5), and shy people could engage easily (2). All felt the course had met their needs. 9 (60%) extremely well, and 6 (40%) reasonably well. More men (56%) felt it had met them extremely well than women (44%), and more felt it had met their needs extremely well in Ghana (56%) than in Nigeria (44%).

The majority of the 8 students interviewed in Nigeria rated it better over the traditional face-to-face: 63% (5) because of flexibility and it encourages self-paced learning and access to diverse resources e.g. *"Blended learning approach offers the flexibility of self-paced learning and access to a wide range of resources*" (Student, Partner University, Nigeria, Female).

But some students from partner universities in Ghana feel that universities are tending to revert to in-person tuition and that this was counterproductive. *"We've all gone back to the traditional one-on-one, like face-to-face class sessions..... blended or online learning module should still continue as it's very convenient for a lot of us.... the virtual class gives us the opportunity to go back and watch the recorded videos of the lectures.... every student has a smartphone so even if they do not come to school, they will know how to manage or use these online platforms. So, we want the contents to be mobile friendly in terms of the delivery"*. (Student, Partner University, Ghana, Male).

5. Contribution

Implementation partners, programme leads in the partner universities and their stories of change indicate that PEBL-WA activities contributed substantially to the observed changes which is not surprising. But it is interesting that the mechanisms they mentioned were more about the way it was done than simply what was done – the intensity and coherence of training inputs, management support and promotion, and the carpe-diem approach – where staff trained by the programme cascaded the training throughout their universities.

University lecturers in Nigeria also felt that PEBL activities had definitely contributed to the changes especially through the cascade training: *"Before the PEBL-WA, the awareness about blended learning was little, but now, most lecturer(s) have now adopted the approach and management of the institution have now updated facilities and installed interactive boards, … lecturers now record their lectures for students to listen after class"* (Lecturer, Partner University, Nigeria, Male)"

Implementation partners and partner university leads felt that PEBL's network building activities contributed substantially to establishing a strong network. All 10 university leads interviewed agreed that networking was very important: "*Initially we had some challenges, but after interaction with LAUTECH and AEFUNAI, that shared knowledge, we were able to solve the challenges*" (University Lead, Nigeria, Male). 8 out of 10 (80%) mentioned professional growth e.g.: "Interaction with other schools have helped professionally and personally, and 2 mentioned that sharing information on policies was helpful e.g.: "*We are working on the BL policy right now and looking at the institutions that are ahead for guidance……the courses we repurposed…. other partner university helped*" (University Lead, Ghana, Female)

All of the implementation partners were confident that the PEBL training had contributed substantially to the increased capacity to develop and use blended learning materials in the partner universities. They attributed this to impact of the cascade training *"[which was] learned from PEBL-EA and incorporated in the proposal this enabled us to achieve the big target numbers"*, and the *"Carpe Diem influencing the influencer training [which] provided an opportunity for the PEBL participants to reinforce what they had learned and develop and practice their training skills"*, and *"Good coordination and clear roles for all of the technical partners and clear guidelines"* (Implementation Partner, Female).

Four of the five SoC submitted by partner universities praised the content and quality of the training *"PEBL was very insightful, informative and interesting. The resource persons are full of knowledge and impacted the information needed."* (Partner University, Nigeria, Female).

University leads felt that the QA training had helped developed standard and quality e.g.: "*Benchmarks were provided, there was strong emphasis on quality of participation*" (University Lead, Nigeria, Male). Again this was corroborated by 11 of the 12 lecturers from partner universities in Ghana who cited participating in QA training as contributing to developing internal QA standard and quality. 7 said that their universities had existing QA arrangements in place prior to PEBL programme but updated them as a result of PEBL.

Implementation partners also identified a number of factors outside programme activities which they felt had contributed to the programme's achievements including the enthusiasm and flexibility of all partner universities - *"Some universities had very dynamic e-learning teams. KNUST had a very innovative outlook. Others with fewer resources were still keen and willing to invest in and use new tools"* (Implementation Partner, Female) and the universities existing LMSs: "*PEBL team had access to participating institution's Learning Content Management System (LCMS) as they carried out their task*" (Implementation partner, Male).
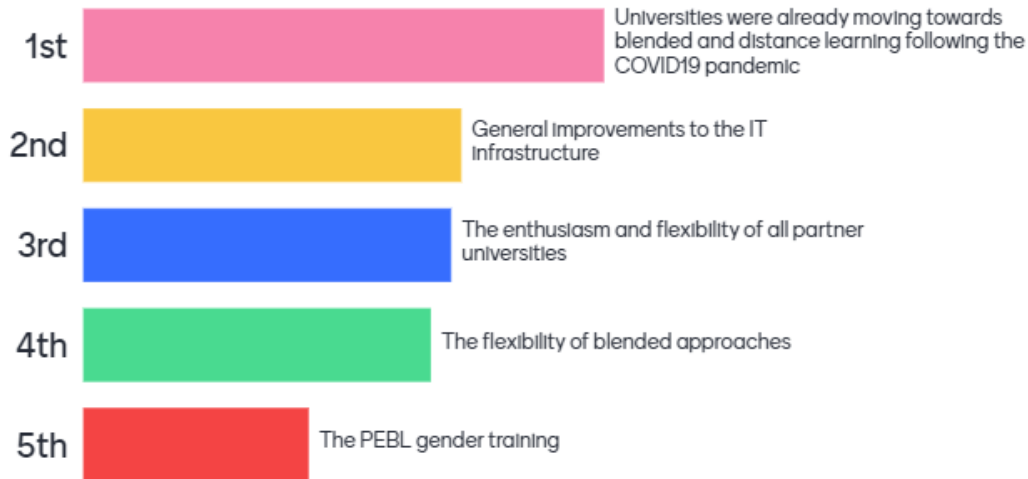
University leads also felt that the fact that many universities were already moving towards blended and distance learning following the COVID19 pandemic helped: *"When COVID 19 came, systems for BL were not in place, but the KsTU university started putting together online resources during COVID, we now put together a strong structure and put together a BL studio during PEBL WA"* (Lecturer, Ghana, Male); and the PEBL gender training: *"Gender training also helped us to take a close look at curriculum drafting"* (Lecturer, Partner University, Ghana, Female).
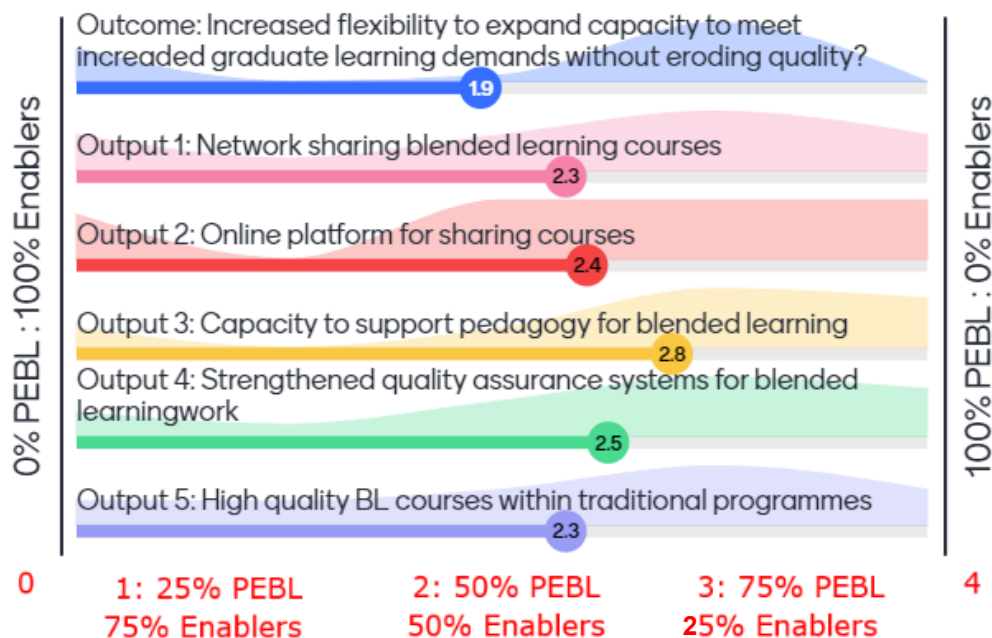
This was confirmed by the SoC and 3 of the 5 SoC from partner universities mentioned improving IT infrastructure as important for improved online learning: *"The IT department played a crucial role in training both tech-savvy and non-technical colleagues"* (Partner university, Ghana, Male).

Students emphasised the flexibility of blended approaches that allowed learning from anywhere: *"This approach makes things easier, the more you learn the course through this approach the more you get to understand the course better as such, if this approach continues it will be helpful"*. (Student, Partner University, Ghana, Male).

In a mentimeter exercise in the final summit workshop we distilled these into 5 factors and asked participants to rank these enabling factors in order of importance. The results were as follows:

1st	Universities were already moving towards blended and distance learning following the COVID19 pandemic
2nd	General improvements to the IT infrastructure
3rd	The enthusiasm and flexibility of all partner universities
4th	The flexibility of blended approaches
5th	The PEBL gender training

We also asked them to estimate the amount to which programme activities and these other enabling factors had contributed to the final achievements. The results were as follows:

0% PEBL : 100% Enablers		100% PEBL : 0% Enablers
Outcome: Increased flexibility to expand capacity to meet increased graduate learning demands without eroding quality?	1.9	
Output 1: Network sharing blended learning courses	2.3	
Output 2: Online platform for sharing courses	2.4	
Output 3: Capacity to support pedagogy for blended learning	2.8	
Output 4: Strengthened quality assurance systems for blended learningwork	2.5	
Output 5: High quality BL courses within traditional programmes	2.3	

0	1: 25% PEBL 75% Enablers	2: 50% PEBL 50% Enablers	3: 75% PEBL 25% Enablers	4

Clearly PEBL-WA came along at the right time when universities were already moving towards doing more blended learning and starting to improve their IT infrastructure, but programme activities also contributed substantially to the individual outputs. It is rather surprising that the contribution at outcome level is rather less than at output level, but they may have also taken into account a wider range of enablers and challenges. We provide more information on challenges in section 7 below.

6. Sustainability

All implementation partners were confident that the changes observed will be sustained beyond the end of the programme. One said *"[I am] Very confident because of the programme design – intensive and comprehensive training, strong collaboration between university partners and very strong need for blended learning in universities"*. As were most of the university leads, one of whom said *"Even when donor support stops, we will continue, we have in our budget support for BL"* (Lecturer, Partner University, Ghana, Male).

This is reinforced by many of the stories of change: *"[the university] remains poised to embrace the future of education with open arms and a commitment to continuous improvement"* (Partner University, Nigeria, Male); *"the high level of enthusiasm generated throughout the university by the PEBL West Africa programme has resulted in the development of a Blended Learning Guideline for the university duly approved by the University Council and acquisition of relevant equipment from other sources to support blended learning"* (Partner university, Ghana, Male)".

And by the university staff survey where 54 (96%) of respondents said they thought the changes would continue after PEBL had finished with very little difference by gender, country, or role. Of the 51 who responded to the follow-up question "why": 14 (27%) said because it is the only way to deal with the increased demand; 13 (25%) said because the policy has been established; 8 (16%) said because of the number of staff trained and courses developed; and 5 (10%) said convenience: *"It is convenient for both staff and students. (Lecturer, Partner University Ghana, Male). More people will embrace blended learning as it makes for easier and enduring dissemination of information.* (Lecturer, Nigeria, Male).

Implementation partners are confident that networking and knowledge exchange between partner universities will continue after the end of the programme because *"the LMSs are functioning, and the universities have been empowered"*. But some felt that long term sustainability will depend on regulators providing ongoing support: *"It would have been rewarding if ACU can work with NUC to strengthen the activities"* (Implementation Partner, Nigeria, Female). Five of the university leads felt that while *"BL has come to stay in my university"* (University Lead, Nigeria, Male) continued institutional support will be necessary to ensure sustainability e.g.: *"Initially we just had the system but not the capacity to use it. We need to constantly train facilitators"* (University Lead, Ghana, Male).

While PEBL-WA-funded training will not continue beyond the end of the programme, students were confident that the increased use of blended learning will because e.g. *"the university is actively investing in ongoing training to promote BL adoption"*. (Student, Ghana, Female), and because of the growing need: *"the experience of COVID teaches us to be prepared at all times"*; the number of staff trained in participating institutions; and *"both partner and non-partner universities express commitment to sustaining changes"* (Implementation partner, Female). Interviews with students in Ghana indicates that local ownership by management and strengthening existing infrastructure, building new ones and providing supports to students and staff will ensure the adoption of BL *"I want my university to always do training or do make sure they create awareness or they talk more BL to the students, especially the continuing students"* (Student, Partner University, Ghana, Male).

Three of the 6 partner university leads in Nigeria are confident that improved QA processes will continue after PEBL because they had existing QA structures in place before PEBL WA e.g. *"We have existing QA guidelines through the Directorate of QA, but we just expanded knowledge in that area through PEBL."* (University Lead, Nigeria, Male)

And there is certainly strong demand for blended learning from students. Seven of the 8 students interviews from partner universities in Ghana hyped the merits of BL and advocated for its sustainability. E.g. *"For me personally, I like the fact that I'm able to go back and watch the lessons and lectures, so I can keep on going back to research, whatever I do, I'm able to get it fast.... the availability of the technological platforms enabled me to learn anywhere on my smartphone or computer... I don't have to carry books along.... and it has increased my engagement with my lecturers and colleagues.... in fact, I can say my performance has increased"* (Student, partner University, Ghana, Female).

7. The theory of change – did it work?

Assessing whether the ToC worked requires not only assessing whether the planned activities were delivered, and they led to the expected outputs and outcome, but also assessing what other factors might have contributed to this, whether the assumptions underpinning the ToC were right, and whether any other different activities could have improved the outcome.

In this section we will present evidence about challenges and enablers that also contributed to the final results, and the results of discussions in the Co-Analysis workshop where mixed groups of participants were asked to discuss whether all of the activities and outputs were necessary to achieve the observed progress towards the outcome, whether there was anything else that might have helped, and whether there is evidence that the assumptions were correct.

Challenges

PEBL reports, implementation partners, university leads, and stories of change all mentioned access to the internet and its cost as the biggest challenge to implementing blended learning: *"the full-scale deployment of blended learning requires the availability of steady power supply and high-speed internet access"* (Story of Change, Nigeria, Male). University leads also mentioned workload, mindset and the scale of the challenge: "the mindset of old generation" (University Lead, Nigeria, Female); *"Pressure of work was much for people which made many to drop out"* (University Lead, Nigeria, Male); *"the challenge of scaling the training. We have 99 departments; the institution is huge"*. (University Lead, Ghana, Male). Implementation leads also mentioned the challenge of engaging with the NUC in Nigeria.

Of the 60 university staff who responded to the survey question about challenges: 25 (42%) said poor internet infrastructure and connectivity, 10 (17%) said high staff workload, 6 (10%) said access to devices for staff and students, 5 (8%) said lack of funds, 5 (8%) said the scale of the change, and 4 (7%) said erratic power.

Interviews with lecturers in both Ghana and Nigeria emphasised high workloads: *"The challenges were workload and clashes with other internal programmes. Because of this people have to multitask"* (Lecturer, Non-Partner University, Male, Nigeria), *"the challenge has always been with trying to do this alongside the main academic calendar where lecturers are busy with lecturing, assessment and research and everything"* (Lecturer, Partner university, Ghana, Male). This was surprising since being given the time to do the training was part of the partnership agreement between ACU and the partner universities.

Implementation partners mentioned that internal issues in some institutions meant they could not meet set standards, that knowledge sharing was limited by coordination issues and some partners did not fully deliver on commitments: *"Only 6 institutions completed all phases of the NOUN training"* (Implementation partner, Female) 5 out of 10 university leads mentioned that disparities in infrastructure between universities was a significant challenge e.g.: *"challenges in online learning encountered in other universities"* (University Lead, Nigeria, Male). *"If one university in Ghana has this number of studio labs, we also should have"* (University Lead, Nigeria, Female). *"We are all at different levels"* (University Lead, Ghana, Male).

Three of the 5 SoC from non-partner universities mentioned that unfamiliarity with the LMS undermined some of the training *"A few participants were new to the platform and could not have benefited much because they had to learn and practice a lot within the shortest possible time"* (SoC, Non-Partner University, Ghana, Male).
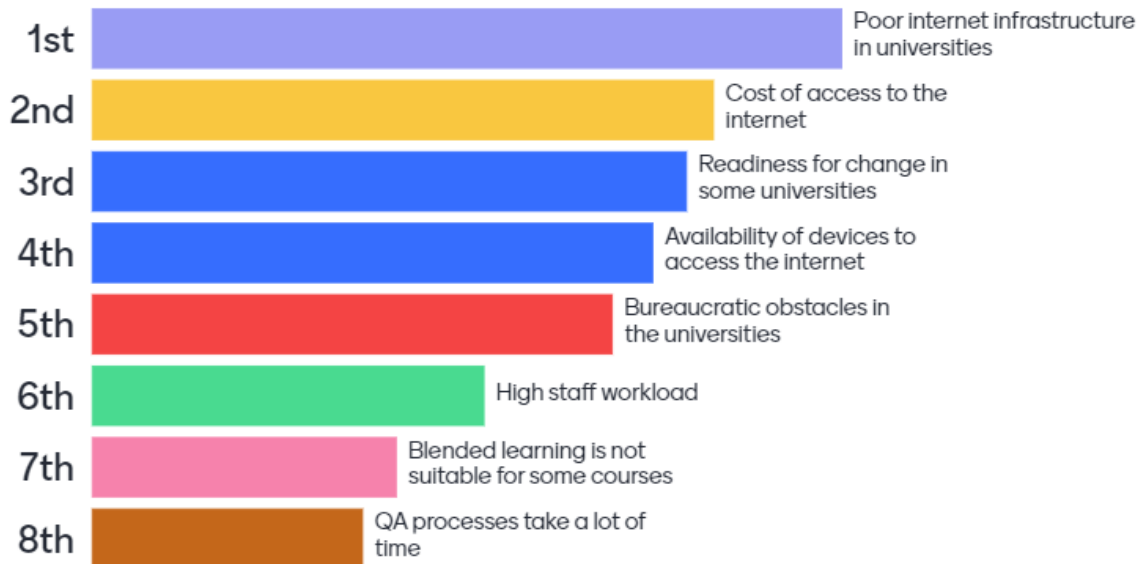
The most frequently mentioned challenges to blended learning mentioned by the 17 students who responded to the survey were: Poor access to the internet (10, 60%), lack of devices to access the internet and LMS (3, 18%), the need for new software to access the LMS etc (2, 12%) and unreliable power supply at home and in the university (2, 12%).

Nine out of 12 partner university lecturers interviewed in Ghana (75%) identified implementing the QA processes were time consuming and created a bottleneck. One said "*we are unable to conduct end-*

of-semester examinations online as our regulators have not approved it yet" (Lecturer, Partner University, Female), and another that *"I have two courses pending approval"* (Lecturer, Partner University Ghana, Female).

Participants in the Co-analysis workshop were asked to rank these challenges in a Mentimeter poll. The results were as follows:

1st	Poor internet infrastructure in universities
2nd	Cost of access to the internet
3rd	Readiness for change in some universities
4th	Availability of devices to access the internet
5th	Bureaucratic obstacles in the universities
6th	High staff workload
7th	Blended learning is not suitable for some courses
8th	QA processes take a lot of time

Assumptions

The ACU proposal to DFAT included a ToC but no explicit assumptions. This was discussed in the Lagos meeting, and a set of implicit assumptions was agreed that could be tested during the evaluation. There was substantial evidence from the surveys and interviews that these were broadly right:

- The approach and expected results will be affected by the country context: While the overall results were not substantially different in Ghana and Nigeria some differences in the context which affected implementation were mentioned. NOUN staff mentioned that some HEIs dropped out because of *"limited resources and lack of awareness of the programme"*, and that universities in different parts of Nigeria faced different challenges and that *"it would have been better if ACU selected per zone and the selected will be able to scale up in their region."*. There were also differences in the degree of engagement of the regulatory bodies – see below.

- Teaching staff are willing and incentivised to adopt blended learning: The evidence of achievement presented above demonstrates that this was the case. University leads also mentioned various mechanisms to incentivise teaching staff including covering the cost of data: *"ACU supported training by helping us support our staff by providing cost of data"*. (University Lead, Nigeria, Male); giving leadership roles to and promoting participants: *"We gave Leadership roles to those who participated and that motivated a lot of people"* (University Lead Nigeria, Male), and *"We had to work this out as an incentive to promotion"* (University Lead, Ghana, Male); and providing Institutional funding: *"We had instances where people are not only paid for attending workshop but also paid to repurpose their courses. That made them work very fast"* (University Lead, Ghana, Male)

- Students are able to access and use online learning materials: Over and above the evidence provided under Output 3 above, the student survey confirmed that they were able to access the blended learning materials and it met their learning needs. 15 out of 17 student responses to the student survey (88%) had attended blended learning sessions with very little variation by gender or country. Most (86%) scored the quality and usefulness of the course as excellent, with no difference by country or gender. All felt the course had met their needs. 9 (60%) extremely well, and 6 (40%) reasonably well. All students interviewed in Nigeria (100%) reported that they have

access to the online materials saying that *"It was very easy to navigate"* (Student, Partner University, Nigeria, Male)). As did students from Ghana who said it was easier to access courses and *"provided swift ways of learning" and "is far better than old methods of learning where you had to carry many notebooks and textbooks, along with loads of lecture notes"* (Student, Partner University, Ghana, Male).

- Partner university management will be willing to adopt and replicate PEBL initiatives and have the resources: Implementation partners and university leads from both countries highlighted the mechanisms put into place by university management to support blended learning eg *"We will continue, we have in our budget support for BL even when donors move out and no financial support anymore. We have intentional support from the university"* (University lead, Ghana, Male). This was confirmed by lecturers from partner and non-partner universities who described changes in policy: e.g. *"The University has established Policy on e-learning"* (Lecturer, Partner University, Nigeria, Female) and *"we are currently developing eLearning policy for the institution"* (Lecturer, Non-Partner University, Nigeria, Male). Others described improved facilities e.g. *"management have now updated facilities and installed interactive boards"* (Lecturer, Partner University, Nigeria, Male)" and strengthened quality assurance e.g. *"The Quality Assurance Unit has already mandated lecturers to incorporate BL elements into their courses"*. (Lecturer, Partner University, Ghana, Male)

- Regulatory bodies will support blending learning. As mentioned above, the programme found it difficult to engage with the National Commission in Nigeria despite many meetings by all implementing partners. GTEC joined as an implementing partner in late 2022 to undertake a study of blended learning policy in Ghana, which has led to the development of proposed policies, though *"GTEC [now] need to put in place all measures to ensure quality"* (Implementation partner, Ghana, Male). While the lack of engagement didn't seem to undermine the delivery of programme outputs and the outcome, the implementation partner felt that *"more work needs to be done with the regulatory bodies"* (Implementation partner, Female) if blended learning is to be widely replicated.

The ToC

Participants in the Co-Analysis workshop were asked whether all of the outputs were necessary and whether any additional outputs could have helped. The key conclusions were that all outputs were necessary, but that given the problem of internet connectivity it might have helped if the programme had included an output on this. That could include providing resources for less well funded universities and providing practical support through a national partner in each country with expertise on this issue. Also, and especially to ensure wider replication and sustainability to have an explicit output to gain the support of the national regulatory authorities.

8. Conclusions and Recommendations

Conclusions - the big stories

Participants in the co-analysis workshop identified five "big stories" about the programme based on the results of the evaluation which they elaborated further in the final summit workshop.

Blended learning is better for students, teachers, and universities:

Blended learning offers distinct benefits tailored to the needs of students, teachers, and universities. For students, the approach increases flexibility in scheduling and accessing course materials, which can lead to a better balance between academic and personal commitments. The interactive and engaging nature of blended learning also boosts student motivation and enriches the learning process. For teachers, blended learning reduces the workload by streamlining lesson delivery and enabling more effective use of teaching time. It encourages the integration of salient teaching points and interactive content, which enhances the overall quality of education provided. Additionally, the shift to blended formats has been shown to reduce stress among faculty by offering more adaptable teaching methods, particularly beneficial in the wake of the COVID-19 pandemic. For universities, adopting blended learning can foster a more inclusive educational environment, make it easier to offer a more diverse array of courses and learning modalities and increase student number without reducing quality. Blended learning leverages technology to create a more dynamic, flexible, and inclusive learning environment that can meet the evolving needs of students, teachers and other university staff.

The PEBL-WA approach worked but it needs dedication and commitment:

The PEBL-WA approach to blended learning has been very successful, significantly enhancing the quality and flexibility of courses in partner universities. It enabled lecturers to deliver courses more flexibly which could allow an increase in enrolments and generate additional revenue for universities. But the success of the programme required substantial dedication and commitment from all participants who recognized the long-term benefits of blended learning. It was very time-consuming, and lecturers had to juggle their regular responsibilities alongside the demands of the project, often working late into the night and during financial challenges including strikes in Nigeria when salaries were halted, and data costs rose. NOUN's thorough training sessions, and the programme leaderships' network-building efforts helped maintain morale and commitment.

It has led to changes in capacity, practice and policy:

PEBL-WA has notably transformed educational practices, capacities, and policies within participating universities, fostering a robust culture of online learning over 18 months. The programme delivered enhanced capabilities in both blended learning facilitation and course design, helping institutions recognize and adapt to the nuances of effective digital education. Lecturers have shifted from merely transferring notes online to incorporating interactive, multimedia, and collaborative elements that enrich the student learning experience. Furthermore, PEBL-WA has contributed to the development and adoption of blended learning policies in partner universities and the sustainable integration of these practices institution-wide. It has even influenced promotion criteria, now requiring faculty members to develop modules in blended formats as a measure of their adaptability and innovation in teaching.

PEBL-WA is sustainable and replicable:

Partner universities have recognised the potential of BL to significantly boost productivity and the observed changes are very likely to be sustained. A notable example is AE-FUNAI in Nigeria, where over 1,000 students and lecturers have benefited from BL training sessions. This institution has not only established a dedicated BL unit but also developed and implemented a comprehensive policy for BL, endorsed by the management as a preferred teaching method. Challenges such as inadequate infrastructure and essential tools remain significant but have been overcome by the high motivation levels of participants—students driven by their educational aspirations and lecturers inspired by the

rewards of effective teaching. The key to overcoming these obstacles lies in institutional support—urging universities to provide the necessary resources, infrastructure, and policies to facilitate BL's integration. By building capacity, providing key insights, and fostering an environment supportive of BL, PEBL has set a precedent that can be replicated across the region. This sustained effort promises to transform the learning experience in Ghana, Nigeria and beyond, paving the way for a future where blended learning is a cornerstone of educational systems in West Africa.

National regulators need to be involved for replication and sustainability

The involvement of national regulators is essential for the replication and sustainability of BL in Nigeria and Ghana. NOUN already has, and GTEC is developing comprehensive policy frameworks to entrench BL into the educational system and also standardise it across institutions. They need to include setting a minimum threshold for BL adoption and creating specific accreditation models that differ from those used for traditional full-time programs. A collaborative approach involving roundtable discussions between universities and regulators is crucial. These discussions should aim to define the support needed for successful BL implementation and establish clear metrics for evaluating BL programs. Such strategic involvement would ensure that BL initiatives are effective and enduring, and aligned with national educational standards and goals.

Recommendations

Participants in the final summit workshop generated the following recommendations from the evaluation for each of the key evaluation users.

ACU should:

1. Do more desk research to understand the local context before planning projects – to enable better selection of and dialogue with university partners and regulatory authorities.
2. Involve regulators early at design stage - to identify how best to support and work with them, for example with the NUC who already have a policy to promote blended learning in Nigeria.
3. Continue to support the PEBL-WA network with training and knowledge sharing activities –to bring all up to the same level so they can then help others.
4. Evaluate the impact on universities which have implemented BL - to identify and champion best practice and generate evidence to support wider uptake nationally and internationally.
5. Co-design activities with university partners - to understand and be able to provide a flexible package of support for their individual challenges and contexts.
6. Work with IT partners – especially national internet service providers to address infrastructure issues in universities and global players to identify and capitalise on new technology including AI tools.

Partner Universities should

1. Advocate for the integration of supportive policies, incentives for lecturers and institutional support to integrate BL training and workshops throughout the curriculum within partner universities.
2. Conduct and assessment of infrastructure requirements for BL implementation so they can advise other universities on what is required and good procurement practices.
3. Develop and use an evaluation framework for assessing the effectiveness of BL to generate evidence of its effectiveness and advocate for national policies on BL in West Africa.
4. Develop a platform for partner universities to be able to continue to collaborate, share experiences, and exchange knowledge.
5. Continue to work together to identify areas for improvement, avoid mistakes and showcase the benefits of BL to students.

Regulatory authorities should:

1. Promote partnerships and collaborations among the different stakeholders involved in promoting BL.
2. Continue to develop and implement comprehensive national policies and guidelines for blended learning (BL).
3. Organise policy dialogues involving all relevant stakeholders to facilitate the sharing of best practices and frameworks between institutions and support BL capacity building initiatives for universities and other educational institutions.
4. Do more work on institutional and pedagogical QA and embed learner support mechanisms within the programme accreditation process.
5. Collaborate with regulatory authorities in other countries to share experiences and lessons.

DFAT and other donors should:

1. Develop a detailed understanding of the local context before planning projects.
2. Strengthen existing initiatives rather than starting new ones.
3. Provide longer term flexible funding including additional resources for existing projects if new needs or opportunities emerge.
4. Allow time to evaluate the long-term impact of policies and programmes before looking for something new.

Annex 1: PEBLE-WA Programme design and ToC

Programme design[1]

PEBL-WA was designed as a 2-year capacity strengthening process to address a range of capacity challenges in higher education in Ghana and Nigeria which include:

- In Higher Education Institutions: which face ongoing struggles in implementing blended learning policies in their organisations as well as robust quality assurance policies related to the new pedagogy.
- Among Academic Staff: who face a lack a capacity in the developing and teaching blended content.
- Among Students: who often faces a lack of technological capacity when trying to access blended learning.

To address these challenges PEBL-WA aimed:

- To work with senior leaders in the partner universities to instigate and support (where necessary) the adoption of Blended Learning and Quality Assurance policies.
- To support partner university staff through a suite of trainings to develop their blended learning skills and to be able to teach those newly developed skills to their colleagues who are not reached directly by the programme, developing these staff members into a cadre of experts available to the individual universities and beyond.
- To work with students to improve their technological skills as well as their access to blended learning modules so they can have the greatest benefit from their learning. Courses that develop their soft skills will be prioritised for development and support will be provided to strengthen the universities' Virtual Learning Environments (VLEs) and Learning Management Systems (LMS) where necessary.

The programme aimed to work with six universities in each of Ghana and Nigeria to support academic staff in effective pedagogical approaches for blended learning. This would encompass capacity to support a range of academic activity including instructional design, content development and quality assurance. Activities were designed to ensure that:

- a cadre of 100+ university staff were trained as leaders to support their academic colleagues in the effective design and delivery of teaching, learning and assessment materials for blended learning courses;
- 1,200 lecturers at partner universities were trained to teach blended learning courses;
- 12 universities were considering modalities for institutionalising pedagogical and educational development support and are equipped to quality assure blended content;
- 5,000 students were trained on the use of online tools and learning management systems and can use blended learning courses; and
- 3,000 students were equipped with the necessary soft skills to be employable.

The goal of the original Theory of Change (ToC) was *"Performance of partner universities in West Africa improved"* and the purpose was *"Increased flexibility in West African Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality"*. There were five outputs: 1) *"Network of universities for sharing degree courses through blended learning"*; 2) *"Online platforms for sharing modules"*; 3) *"Capacity to support pedagogical approaches for blended learning"*; 4) *"Strengthened QA systems for blended learning courses"* and 5) *"High quality credit-bearing BL courses included within traditional programmes"*.

The programme also planned to involve the national university accreditation bodies in Ghana and Nigeria to *"integrate the approaches being developed into the national and regional higher education systems, effecting long-term transformational change"*.

The original ToC is provided below, together with changes suggested in the evaluation inception meeting in Lagos in November 2023.

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[1] This text has been summarised from the ACU proposal to DFAT.

The Theory of Change (as revised for the evaluation)
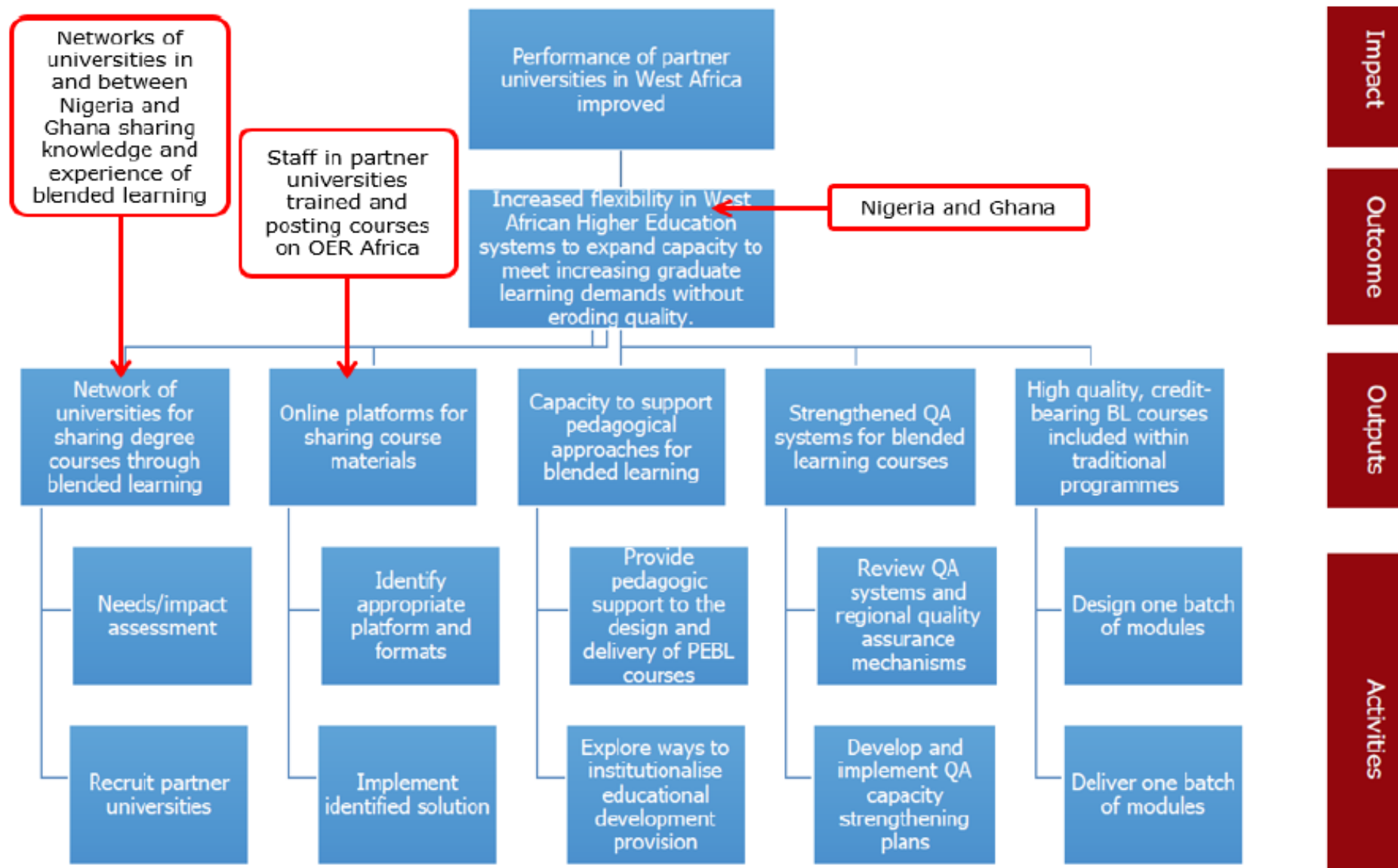
Annex 2: Key evidence collected during the evaluation

Colour key of sources/evidence: Document review, Implementation Partners interviews, PSC Interviews, Stories of Change, University Staff Survey, Lecturer Interviews, Student Survey, Student Interviews,

EQ1 - What is the evidence that there is Increased flexibility in Nigerian and Ghanaian Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality and that it is sustainable?

Outcome	Evidence supporting observations	Source
What is the evidence that there is "Increased flexibility in Nigerian and Ghanaian Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality". Log frame indicators: all 12 partner universities have expanded capacity to incorporate blended learning courses into their academic planning. 7 reforms supported by PEBL WA in partner universities have taken place. 36 staff in partner universities trained by SEDA, 329 trained by NOUN, 1,000 staff trained by cascade training in partner universities. 12 blended courses (1 in each partner university) meet agreed quality benchmarks. 5 reform processes at the national or regional level supported or inspired by PEBL WA which have led to institutional change at that level.	• All 12 HEIs have expanded capacity. 95% universities have implemented reforms including new policies (33%) upgraded IT (22%). 38% have implemented Moodle. Improved engagement of academic staff among participating universities in the region. 35% of academics in PEBL WA noted that the programme has added value to teaching practices. Over 50% noted that it has increased the faculty's willingness and ability to implement blended learning. 98% of those participating in trainings believed that the capacity strengthening activities of the programme had a positive impact on their professional. Comments included *'I have become a facilitator of learning, rather than a boss lecturer'* and *'The University's capacity to conduct online teaching and learning has been greatly enhanced'*. • All 12 universities have expanded capacity, All are developing or implementing policy reforms. 30% on online blended learning, 20% on blended learning strategy and 40% have upgraded IT infrastructure. • Leads from ACU, CoL and SEDA all agreed that the programme had exceeded expectations broadly in line with the estimated of PSC members in the Lagos workshop – *"[The programme] "has delivered the outputs – as they were reworked – built the network, done the trainings, developed courses etc. [It] has also achieved the outcome according to performance against the indicators in the log frame". (ACU)* • NOUN staff interviewed felt that PEBL-WA programme had a significant impact on all participating Higher Education Institutions (HEIs). *"Even though the result of the survey (mentimeter result) is above 'As expected,' it is 'More than expected' from the technical perspective. (Project Technical Lead, male)".* As a result: ◦ The HEIs have committed to increasing their capacity to include blended learning courses in their academic planning. ◦ This move will help to enhance the resilience of their learning activities for management, staff, and students. *"PEBL-WA appears to have achieved positive results based on its intended goals and objectives. (Project Coordinator – Academic, female)"* ◦ The participants demonstrated a higher level of technical proficiency than initially anticipated, which can be attributed to their discovery of the importance of blended learning as a tool for resilient learning during the COVID-19 lockdown. *"The performance of the implementing partner during the COVID-19 pandemic became a source of motivation for the participants."* • Both informants from NOUN and GTEC agreed PEBL WA has achieved its outcomes and outputs, they did not have time to go through the mentimeter results. • GTEC achieved its terms of reference. Policy audit and situation analysis done. - *"I agree that as expected the PEBL WA programme has achieved the expected results" (GTEC, male)* • The 10 PEBL PSC members from Ghana and Nigeria, agreed that there are specific improvements or changes observed as a result of the PEBL WA training. Specific changes were: ◦ The PEBL WA enhanced capacity of lecturers (10).eg ""*Capacity on online facilitation has been expanded*" (Male, Nigeria). ◦ All 6 (60%) Nigerian universities emphasized attitudinal changes, acceptance and enlightenment as a result of PEBL WA e.g *"Community became more enlightened as a result of PEBL" (Male Nigeria)*. ◦ Institutional policy changes mentioned by 8 out of 10 (80%) with all 4 Ghanaian universities emphasizing policy changes eg: "*The PEBL has achieved that …. as a result of the awareness, we have a policy now, and a policy formulation committee*..."(Ghana, Male). ◦ 4 out of 10 (40%) PSC members mentioned PEBL WA enabled them acquire the necessary infrastructure needed for BL with	• PEBL Narrative report 21-22 • PEBL Narrative report 22-23. • Implementation Partners interviews • Implementation Partners interviews • Implementation Partners interviews • Implementation Partners interviews • PSC Interviews

Outcome	Evidence supporting observations	Source
	no variation by country eg: "*We now put together a strong structure and put together a BL studio. These investment were put together based on PEBL*".(Ghana, Male) o PEBL WA leads in KNUST and UI stated that over 500 students and 100 lecturers were trained eg: "*The training was now cascaded where over 500 students and 100 lecturers were selected for the trainings*" (Nigeria, Female) "*We have more students over 500 having trained in BL*". (Ghana, Male) • All of the 5 SoC submitted by partner universities described increased capacity to develop and implement blended learning as a result of PEBL eg – "*The impact was evident as requests for more engaging project activities poured in. There was a noticeable yearning among academic and professional community members to fill the knowledge gap in technology and pedagogy. The programme ignited a thirst for continuous learning and improvement.*" (Nigeria). • All of the 5 SoC submitted by non-partner universities described improved capacity afterwards to develop and deliver blended learning eg – "*After the training, I can generate content for the courses I teach. I have been able to minimize my face-to-face encounters with my students. I have provided more content on their course pages and developed videos and other materials that make it easy for self-learning.*" (Male, Ghana). "*As we plan to incorporate blended learning …. the insights gained from this training will undoubtedly play a pivotal role in the successful implementation of our vision (Female, Ghana).* • 4 (20%) mentioned the course development and online materials training eg – "*The repurposing of courses and the online facilitation training. (Ghana Female). The training on how to create e-tivities to test and encourage learners to participate in blended learning (Ghana, Male)*" • 57 out of 58 (98%) of partner university staff who responded to the survey said that PEBL had made a difference to their universities ability to develop and deliver blended learning university survey. 6 (10%) said a small difference, 35 (60%) a significant difference, and 16 (27%) dramatic or transformative difference. There was little difference by country or by level of role, but more women (47%) than men (22%) said dramatic or transformative, as did more management (50%) and support staff (40%) than academic staff (23%). • ALL RESPONDENTS FROM THE PARTNER INSTITUTIONS IN NIGERIA SEEMS TO AGREE TO THE WIDESPREAD EMBRACE OF BLENDED LEARNING BUT 55% (6 OF 11) OF THEM EXPLICITLY REPORTED THE EMBRACE AND THE ADOPTION OF BLENDED BY THEIR INSTITUTION E.G. "*YES, IT HAS BECAUSE ALMOST EVERY SCHOOL NOW EMBRACED BLENDED LEARNING. EVERYONE'S EYES HAVE BEEN OPENED TO THE USEFULNESS, IMPORTANCE OF BLENDED LEARNING. SO, LET ME SAY BLENDED LEARNING HAS COME TO STAY. CURRENTLY, WE HAVE A BLENDED LEARNING COMMITTEE ALREADY (PARTNER LECTURER, FEMALE, LAUTECH)*" • 10 (83%) OUT OF 12 PARTNER LECTURERS IN GHANA HAVE REPURPOSED SOME OF THEIR COURSES FOR LESSON DELIVERY VIA BL. E.G. "*WE HAVE TRANSITIONED TO ONLINE TEACHING, AND IT IS MANDATORY FOR LECTURERS TO UPLOAD THEIR LESSONS ONTO THE MOODLE PLATFORM AND DELIVER THE COURSE THROUGH IT*". (FEMALE, KSTU). "*STUDENTS ARE ALSO EXPECTED TO ATTEND ONLINE CLASSES*". (MALE, UENR) • ALL 8 STUDENTS FROM THE 5 PARTNER UNIVERSITIES IN GHANA REPORTED THEIR INSTITUTIONS WERE EXPANDING BL CAPACITY. E.G. "*THREE OF MY COURSES WERE TAUGHT USING THE BLENDED LEARNING APPROACH. SOME OF THE SPECIFIC COURSES ARE CREDIT MANAGEMENT, RESEARCH METHODS AND RURAL BANKING AND MICROFINANCE. I HAD SOME FACE-TO-FACE AND OTHER PARTS IN ONLINE LEARNING*". (MALE, KSTU) • ALL 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA REVEALED BL OFFERS THEM MORE FLEXIBILITY AND SOME COST SAVINGS. E.G. "*IT HAS HELPED ME IN PARTICIPATING IN MY COURSES. AND IT WAS ALSO REALLY ACCESSIBLE SO YOU CAN ACTUALLY STAY IN THE COMFORT OF YOUR HOME AND THEN DO YOUR STUDIES*". (FEMALE, UHAS)	• Story of Change • Story of Change • Story of Change • University staff survey • LECTURER INTERVIEWS NIGERIA • LECTURER INTERVIEWS GHANA • STUDENT INTERVIEWS GHANA • STUDENT INTERVIEWS GHANA
• How and how much did PEBL WA contribute to this.	• All implementation partners were confident that PEBL activities had contributed directly to the observed outcomes "*The programme worked intensively with the partner universities over a 2-year period and the training was both intense and comprehensive. CoL as technical partner focused on training on the institutional QA review, and QA for blended learning. The PEBL-WA activities was arranged so that all of the training happened at the same time. Staff in the universities got the best of everything. Technical partners brought technical expertise. NOUN very strong on blended learning. CoL has lots of rubrics for the institutional QA review etc. Partners were flooded with useful information in an intensive but very well designed way*" (CoL). "*The programme significantly improved technical skills and digital literacy for many participants (NOUN Project Coordinator – Academic, female)*"	• Implementation Partners interviews • PSC Interview

Outcome	Evidence supporting observations	Source
	• All the 10 PSC members across both Nigeria and Ghana mentioned the crucial role of management support and promotion in driving improvements through the PEBL programme eg: "*The management saw the need, and promoted PEBL programme. management support contributed to the achievement" (Nigeria, Male.*)	• PSC Interviews
	• The Capacity building through training programs provided by PEBL West Africa is highlighted, by all the PEBL PSC in both countries, as a significant factor contributing to improvements eg:" *The CAPDIEM training helped...contributed " (Ghana, Female)*; eg:"*Online training, and use of LMS under the PEBL, and the cascading of the training has contributed to it".(Nigeria, Male).*	• PSC Interviews
	• The Financial support provided by PEBL West Africa or the institution itself is mentioned by all the PSC across the countries. "*They provided funding to support staff that were involved. The university committed resources to support the funding from PEBL WA"(Ghana, Male)*	• Story of Change
	• All of the SoC from partner universities described how PEBL-WA had been instrumental in improving blended learning in their university eg – ""*The PEBL WA programme positively impacted the university's online education and training. As the capacity of our teaching staff and students was enhanced (Ghana)"*	
	• INTERVIEWS WITH LECTURERS FROM PARTNER AND NON-PARTNER UNIVERSITIES IN NIGERIA INDICATED THAT THE TRAINING OF 6 PARTNER INSTITUTIONS AND CASCADING SAME THROUGH THE TRAINED INSTITUTION TO THE 5 NON-PARTNERS INSTITUTIONS HAS BEEN A GOOD SUCCESS. THE RIPPLE EFFECTS OF THIS CAN BE OBSERVED IN SOME OF THE RESPONSES OF THE RESPONDENTS AS FOLLOWS:	• LECTURER INTERVIEWS NIGERIA
	o COMFORT AND FLEXIBILITY (OFTEN USED BY THE RESPONDENTS) HAVE BEEN BROUGHT INTO LEARNING OF THE STUDENTS E.G. "*THEY WERE COMFORTABLE WITH IT BECAUSE IT MAKES THEIR LEARNING ACTIVITY FLEXIBLE AND THEY CAN REVISIT THE LEARNING MATERIALS (PARTNER LECTURER, FEMALE, UNIVERSITY OF IBADAN)".*	
	o ADOPTION OF BLENDED LEARNING AND FACILITY UPGRADES HAVE BEEN EXPERIENCED BY SOME OF THE INSTITUTIONS AFTER THE PEBL TRAINING E.G. "*BEFORE THE PEBL-WA, THE AWARENESS ABOUT BLENDED LEARNING WAS LITTLE, BUT NOW, MOST LECTURER HAVE NOW ADOPTED THE APPROACH AND MANAGEMENT OF THE INSTITUTION HAVE NOW UPDATED FACILITIES AND INSTALLED INTERACTIVE BOARDS, NOW LECTURERS NOW RECORD THEIR LECTURES FOR STUDENTS TO LISTEN AFTER CLASS (PARTNER LECTURER, MALE, FIRST TECHNICAL UNIVERSITY)"*	
	o THE UNIVERSITY MANAGEMENT EMPHASIZING THE EMBRACE OF BLENDED LEARNING AMONG THE ACADEMIC STAFF E.G. "*THE UNIVERSITY MANAGEMENT ARE NOW EMPHASISING THE EMBRACE OF BL (NON-PARTNER LECTURER, FEMALE, UNIZIK)"*	
• What were the other enablers?	• All implementation partners mentioned the enthusiasm and flexibility of all partner universities as a key enabling factor - "*Some universities had very dynamic e-learning teams. KNUST had a very innovative outlook. Others with fewer resources were still keen and willing to invest in and use new tools" (ACU)"*	• Implementation Partners interviews
	• NOUN staff felt another important enabler was access to the participating HEI's Content Management System (LMS) and good monitoring to provide proper guidance and ensure adherence to quality benchmarks in the implementation of blended learning. "*PEBL team had access to participating institution's Learning Content Management System (LCMS) as they carried out their task*" (NOUN),	• Implementation Partners interviews
	• Other enablers mentioned by PSC members included the following:	
	o 2 PSC members in Ghana and Nigeria mentioned gender training by PEBL-WA eg: "*Gender training also helped us to take a close look at curriculum drafting" (Ghana, Female).*	• PSC Interviews
	o 1 PSC member in Nigeria mentioned stipend *eg:* "*all those trained enjoyed some stipend for data "(Nigeria, Male)*	
	o 1 PSC member in Ghana mentioned interest as an enabler *eg:* "*the interest generated contributed to the improvements...."(Ghana, Male)*	
	o Some partner universities had existing structures eg: "*UNILAG has been on LMS cos of covid, but PEBL had its own positive impact beyond just using the tool cos of covid" (Nigeria, Male).* "*UI has benefited from other trainings on online teaching before the PEBL WA came on board" (Nigeria, Female).* "*When COVID 19 came, system for BL were not in place, but the KsTU university started putting together online resources during COVID, we now put together a strong structure and put together a BL studio during PEBL WA" (Ghana, Male).*	
	• All of the SoC from Partner universities identified a general shift towards online learning that started before PEBL started including the pursuit of academic excellence, Covid19 and rising student numbers eg - "The journey began on March 16, 2020, when	• Story of Change

Outcome	Evidence supporting observations	Source
	Ghana grappled with a partial lockdown due to the onset of the Covid-19 crisis" (Ghana). "The university has an objective to use information *and communications technology and other educational tools to enhance teaching, learning and research activities" (Ghana).* • Three of the 5 SoC from partner universities mentioned improving IT infrastructure as an important precursor to improved online learning eg – *"The IT department played a crucial role in training both tech-savvy and non-technical colleagues" (Ghana).* • CONVENIENCE OF LEARNING FROM ANY LOCATION. ALL 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA CITED THE FLEXIBILITY AND MOBILITY OF BLENDED APPROACHES THAT ALLOWED LEARNING FROM HOME OR ON THE GO AS A MAJOR DRIVER OF THEIR ACCEPTANCE. THEY APPRECIATED NOT BEING RESTRICTED TO PHYSICAL CLASSROOMS. E.G. *"THIS APPROACH MAKES THINGS EASIER, THE MORE YOU LEARN THE COURSE THROUGH THIS APPROACH THE MORE YOU GET TO UNDERSTAND THE COURSE BETTER AS SUCH, IF THIS APPROACH CONTINUES IT WILL BE HELPFUL"*. (MALE, ANU).	• Story of Change • STUDENT INTERVIEWS GHANA

• What were the challenges?	• Unstable and inconsistent internet and power access hampers experience of trainings and willingness to adopt blended learning. Engagement with national regulatory bodies in Nigeria requires local support.
	• All implementing partners mentioned similar challenges in the universities: including that staff have very limited time for additional activities; poor infrastructure and internet connectivity; the lack of involvement of the regulatory bodies, especially in Nigeria; and the weak commitment of staff in some universities. *"Inability of partner universities to provide the required infrastructure and a situation beyond ACU" (NOUN, Nigeria, Female).*
	• Both Nigerian and Ghanaian PEBL PSC respondents mention similar challenges related to internet connectivity, power supply, and technological hitches eg: "*Technological hitches, internet, power supply". (Ghana, Male).*
	• Generating interest and acceptance among faculty members and management is highlighted as a crucial aspect in Ghana by PSC member eg: "getting faculty to participate was a challenge (Ghana, Female)". Other challenges mentioned by PSC members included:
	  o mindset as a challenge eg: *"Challenges.......mindset of old generation" (Nigeria, Female).*
	  o time and workload eg: *"Pressure of work was much for people which made many to drop out" (Nigeria, Male).*
	  o cascading the training eg: "*Challenge of scaling the training. We have 99 departments; the institution is huge*". (Ghana, Male)
	• The SoC from partner universities identified a wide range of challenges to establishing blended learning including:
	  o Infrastructural deficits eg – "*the full-scale deployment of blended learning requires the availability of steady power supply and high speed internet access" (Nigeria). "Unfortunately, many lecturers do not have computers, as a Professor's current monthly salary (of less than USD300) can scarcely buy a new laptop computer, and the students are often poor and lack access to credit facilities (Nigeria)"*
	  o Capacity / training gaps eg – "*One of the significant impediments to blended learning was the training gap among academic staff (Nigeria)"*
	  o Lack of political will in some institutions eg – *"A significant shift towards blended learning was hindered by lack of political will from the management team (Nigeria)."*
	• Of the 60 university staff who responded to the survey question about challenges:
	  o 25 (42%) said poor internet infrastructure and connectivity eg – *"The biggest challenge would have to do with internet - the cost of data and stable internet to attend live sessions, and the need to commit to infrastructure that will facilitate quality material preparation for delivery. (Ghana, Male)"*
	  o 10 (17%) said high staff workload eg – "*Busy schedule by staff of the university. Obviously academic calendar never gave any staff breathing space. (Nigeria, Male). Combining the normal work schedule with the training schedule. (Ghana, Male)"*
	  o 6 (10%) said access to devices for staff and students eg – "*It is not a compulsory to engage students online Students lack laptops. (Ghana, Male). Lack of personal computers for the staff to practice on their own after being taught. (Nigeria, Male)"*
	  o 5 (8%) said lack of funds eg – "*Financial support for execution. (Nigeria, Female)" "Inadequate material resources and funding. (Ghana, Male)*
	  o 5 (8%) said the scale of the change eg – "*Moving from the traditional teaching methods to student center methods. (Ghana, Female)." "Preconceived ideas and inability to leave the status quo and embrace the new. (Nigeria, Female)"*
		• PEBL Narrative report 21-22
		• Implementation Partners interviews
		
		• PSC Interviews
		
		• PSC Interviews
		
		• Story of Change
		
		• University staff survey

Outcome	Evidence supporting observations	Source

	o 4 (7%) said erratic power eg – "*Erratic power supply. (Nigeria, Male)*". "*Lack of electricity supply. (Nigeria, Male)*"
	• SOME OF THE CHALLENGES REPORTED BY LECTURERS FROM PARTNER AND NON-PARTNER UNIVERSITIES IN NIGERIA INDIVIDUALS WERE:
	  o WORKLOAD AND MULTITASKING E.G. "*THE CHALLENGES WERE WORKLOAD AND CLASHES WITH OTHER INTERNAL PROGRAMMES. BECAUSE OF THIS PEOPLE HAVE TO MULTITASK (NON-PARTNER UNIVERSITY, MALE, UNIVERSITY OF JOS)*"
	  o DIFFICULTY IN SCHEDULING FACE-TO-FACE WITH ONLINE SESSION AND PROMPT RESPONSE TO STUDENTS REQUESTS E.G. "*FOR FIRST TIMERS, IT WAS HOW TO SCHEDULE THE ONLINE COMPONENT WITH THE FACE-TO-FACE COMPONENTS. THEN PROMPT RESPONSE TO STUDENT QUESTIONS WAS QUITE CHALLENGING FOR THE NEWBIES; THEY FOUND IT SOMEHOW OVERWHELMING (NON-PARTNER UNIVERSITY, MALE, UNIVERSITY OF JOS)*"
	  o CONTENT DELIVERY AND LMS SETUP "*THERE ARE CHALLENGES IN THE AREA OF CONTENT DELIVERY DUE TO POOR INTERNET NETWORK FAILURE. IN THE AREA OF SETTING UP THE MOODLE LMS, IT WAS DIFFICULT FOR ME TO GET AROUND THE WHOLE PROCESS OF INSTALLATION AND THE TECHNICAL TERMS (NON-PARTNER UNIVERSITY, FEMALE, UNIZIK).*"
	  o ACCEPTABILITY OF THE APPROACH BY LECTURERS AND STUDENTS DUE TO ADDITIONAL COSTS E.G. "*ACCEPTABILITY OF THE APPROACH BY LECTURER AND STUDENTS, THEY WERE COMPLAINING THAT THEY ARE NOT FAMILIAR WITH THE APPROACH AND THAT IT WAS INCURRING ADDITIONAL COST (PARTNER UNIVERSITY, FEMALE, FIRST TECH. UNIVERSITY)*"
	• 10 OUT OF 12 LECTURERS IN PARTNER UNIVERSITIES IN GHANA CITED HIGH ACADEMIC WORKLOADS AND RISING STUDENT POPULATION AS MAJOR BARRIERS TO FACULTY FULLY INTEGRATING NEW BL PRACTICES INTO THEIR TEACHING. EG "*BUT THE CHALLENGE HAS ALWAYS BEEN WITH TRYING TO TRAIN OTHER FACILITATORS IS THAT YOU ARE FORCED TO DO THIS ALONGSIDE THE MAIN ACADEMIC CALENDAR WHERE LECTURERS ARE BUSY WITH LECTURING, ASSESSMENT AND RESEARCH AND EVERYTHING. SO, PEOPLE DON'T REALLY PUT IN MUCH EFFORT TO REALLY APPRECIATE IT.*" (MALE, KSTU)
		• LECTURER INTERVIEWS NIGERIA
		
		• LECTURER INTERVIEWS GHANA

• Will this outcome be sustained after the end of the programme?	• All implementation partners were confident that the changes introduced by the programme will continue after the programme has finished eg: "*[I am]* very *confident because of the programme design – intensive and comprehensive training, strong collaboration between university partners and very strong need for blended learning in universities. All universities are keen to do this. PEBL-trained staff can help*". (CoL)
	• Both Nigerian and Ghanaian PSC respondents stress the importance of ongoing institutional support as a necessary measure to ensure sustainability beyond the programme. Eg: "*The university is already providing subtle support- specifically ensuring that staff are trained expanding capacity building…*"(Nigeria, Male) "*Even when donor support stops, we will continue, we have in our budget support for BL even when donors move out and no financial support anymore*"(Ghana, Male)
	• The SoC from partner universities provide much evidence of changes which will contribute to sustainability including. Eg: "[the university] remains poised to embrace the future of education with open arms and a commitment to continuous improvement (Nigeria)"; "the high level of enthusiasm generated throughout the university by the PEBL West Africa programme has resulted in the development of a Blended Learning Guideline for the university duly approved by the University Council and acquisition of relevant equipment from other sources to support blended learning (Ghana)"
	  o 54 (96%) of respondents to the staff survey said they thought the changes would continue after PEBL had finished with very little difference by gender, country, role or level of job. Of the 51 who responded to the follow-up question "why":
	  o 14 (27%) said because it is the only way to deal with the increased demand eg – "Ability to control large number of students using virtual learning, and the relevance of the teaching methods in our society. (Nigeria, Male). Because of the relevance of Blended teaching and learning in addressing the infrastructural gap of the university. (Ghana, Male)." Because that is the only sustainable approach to teaching and learning. (Nigeria, Male). Blended learning is a paradigm shift from physical teaching to online. Students and teachers have embraced it and it has come to stay. (Nigeria, Male).
	  o 13 (25%) said because the policy has been established eg – "The policy brief emanating from this programme is currently waiting for approval by the Senate of the university. (Nigeria, Female). The university has by policy changed the mode of instruction for the next academic year to the blended form instead of the traditional face-to -face instruction. (Ghana, Male)"
	  o 8 (16%) said because of the number of staff trained and courses developed eg – "My colleagues have been able to repurpose 12 courses and we have trained over 100 faculty to repurpose courses and trained 100 faculty and 500 students on online facilitation and the use of the LMS. (Ghana, Female). University commitment to blended learning. Trained staff as part of blended learning deployment in the university. (Nigeria, Female)"
		• Implementation Partners interviews
		
		• PSC Interviews
		
		• Story of Change
		
		• University staff survey

Outcome	Evidence supporting observations	Source
	o 5 (10%) said convenience eg – "It is convenient for both staff and students. (Ghana, Male). More people will embrace blended learning as it makes for easier and enduring dissemination of information. (Nigeria, Male)	

EQ2. What is the evidence that the expected activities and outputs were delivered?

Output	Evidence supporting observations	Source
1. Networks of universities in and between Nigeria and Ghana sharing knowledge and experience of blended learning Were the expected activities delivered: • Partner universities recruited. • Identify and support needs. or something else? [Log frame indicators: 1: Number of Higher Education Institutions delivering blended learning from other institutions (12) [with disaggregation by country]; 2 Number of Higher Education Institutions developing and/or implementing policies on blended learning.]	• The plan envisaged recruiting 12 universities. • 12 partner universities selected and passed due diligence assessment in Yr1 • Survey of CD needs among university partners completed in Yr1. • Quarterly virtual network meetings of steering committee members on progress and challenges. Independent advisory board meetings to discuss "big picture issues". In-person network meeting planned for Nov 2023. • Planned face-to-face networking event in July 2022 switched to series of online meetings due to residual Covid-19 issues and escalating costs. Survey of CD needs among university partners completed in Yr1. • Institutions in Ghana had policies that guided within the universities. GTEC did not have. *"GTEC now will do a policy dialogue to bring all stakeholders together to speak to what was found on the field and a well structured national policy will be drafted dialogue in march"(GTEC, Ghana, Male)* • The structure of the face-to-face training in Abuja allowing lots of time for informal interactions between participants "helped to build commitment to the approach and build the community. The PEBL Song (written by David Baume for July-in-Abuja and set to music by a participant from PEBL-EA) was a highlight of the time together". • Inviting universities around Abuja to send participants to a training workshop during the final 2 days of the Abuja course which provided an opportunity for the PEBL participants to practice what they had learned and also strengthen links with non-partner universities. • Training of staff in non-partner universities happened because strikes in some Nigerian partner universities prevented cascade training in them and trainees arranged (with permission) to train colleagues from non-partner universities in the use of the approach • All PSC from the Partner universities recruited emphasized skills development and community building eg: "*Staff have developed their skills in LMS which they did not know before" (Nigeria, Male). "We now have a community of experts who went through the training" (Ghana, Male)* • 8 out of 10 (80 %) with all 4 Ghanaian universities are in various phases of policy development and implementation on BL eg "*The PEBL has achieved that …. as a result of the awareness we have a policy now, and a policy formulation committee...*"(Ghana, Male). Eg: "*The Senate approved the BL policy and made BL an official way of teaching alongside in-person" (Nigeria, Male)* • 9 out of 10 PSC (90%) respondents mentioned they have been sharing knowledge and experience of BL eg: "*We acted as trainers, many benefited from KSTU, others are learning from us. We train others….. We offered additional support to other PU…."(Ghana, Male). "We are receiving mentorship from LAUTECH and one university in Ghana KsTU, on our online system."(Nigeria, Male):" We collaborate with LAUTECH and FUNAI to train other universities like Covenant university, FUNAAB, UNIJOS"(Nigeria, Male)* • 10 OUT OF 12 LECTURERS FROM PARTNER UNIVERSITIES IN GHANA CITED NEW POLICIES AND UPGRADING THEIR IT AND INTERNET INFRASTRUCTURE (4/12, 33%). *"PREVIOUSLY, THE UNIVERSITY'S POLICY MANDATED A MINIMUM OF 30% ONLINE TRAINING FOR BOTH STAFF AND STUDENTS. HOWEVER, WE ARE NOW AIMING TO INCREASE THAT TO APPROXIMATELY 50% PER OUR NEW BL POLICY. AS PART OF OUR PILOT PROGRAMME, WE HAVE IMPLEMENTED A TWO-WEEK VIRTUAL TEACHING PERIOD FOLLOWED BY TWO WEEKS OF IN-PERSON LESSON DELIVERY".* (FEMALE, KSTU). "*UHAS RECENTLY OPENED AN ICT INFORMATION CENTRE, WHICH WAS ESTABLISHED THROUGH A PARTNERSHIP WITH THE KOREAN GOVERNMENT. THIS STATE-OF-THE-ART FACILITY PROVIDES VARIOUS INSTRUMENTS AND RESOURCES THAT CAN BE UTILISED FOR*	• DFAT Proposal • DFAT Milestone report 21-22 • DFAT Milestone report 21-22. • DFAT Milestone report 21-22. • DFAT Milestone report 21-22 • Implementation Partners interviews • Implementation Partners interviews • Implementation Partners interviews • Implementation Partners interviews • PSC Interviews • PSC Interviews • PSC Interviews • LECTURER INTERVIEWS GHANA

	MULTIMEDIA PRODUCTION AND ONLINE CLASS SESSIONS. IT IS ACCESSIBLE TO EVERYONE WITHIN THE UNIVERSITY". (MALE, UHAS) • CREATION OF INSTITUTIONAL ELEARNING STRATEGIC PLAN AND POLICY BY SOME OF THE UNIVERSITIES IN NIGERIA IS AN INDICATION OF AN ATTEMPT TO EXPAND CAPACITY TO INCORPORATE BLENDED LEARNING COURSES INTO THEIR ACADEMIC PLAN E.G. *"BEFORE NOW MY INSTITUTION HAVE IN PLACE ELEARNING STRATEGIC PLAN, NOW, WE ARE CURRENTLY DEVELOPING ELEARNING POLICY FOR THE INSTITUTION. IF THIS POLICY IS COMPLETED AND BECOMES A DOCUMENT THAT GUIDES SUSTAINABILITY, THEN THERE IS POSITIVE ASSURANCE THAT THE CHANGES INTRODUCED BY THE PROGRAMME WILL CONTINUE.*(NON-PARTNER LECTURER, MALE, UNIV. OF JOS)	• LECTURER INTERVIEWS NIGERIA

• How and how much did they contribute to the outcome?	• NOUN staff interviewed felt that NOUN's role in creating a support platform to address the challenge of ICT knowledge, enhancing the adaptability of staff to technology and improving the technical skills of academic staff in utilizing digital tools indicate contributions to increased flexibility in accommodating participants.
	• GTEC was surprised to find in their study that many Institutions already had policies on BL. *"The fact that we were quite surprised to see that the institutions had policies for distance education….. It gave us hope, cos it was not a zero case"*(GTEC, Ghana)
	• The PSC members across Ghana and Nigeria emphasized that the following specifically contributed to the outcome of the PEBL WA:
	  o 8 out of 10 (80%) PSC respondents mentioned that Professional growth contributed to the outcome eg: *"Interaction with other schools have helped professionally and personally. We are working on the BL policy right now and looking at the institutions that are ahead for guidance" (Ghana, Female)*
	  o All 10 PSC respondents agreed networking contributed to the outcome eg: *"Initially we had some challenges, but after interaction with LAUTECH and AEFUNAI, that shared knowledge, we were able to solve the challenges" (Nigeria, Male)* *"Collaboration with others helped, coming in contact with NOUN has also helped. Without that we may not have gotten to where we are" (Nigeria, Male)*
	  o 2 out of 10 PSC respondents mentioned policy development contributed to the outcome eg: *"We are working on the BL policy right now and looking at the institutions that are ahead for guidance……the courses we repurposed…. other partner university helped" (Ghana, Female)*
		• Implementation Partners interviews
		
		• Implementation Partners interviews
		• PSC Interviews

• What were the challenges?	• NOUN ED identified several challenges:
	  o Some partner institutions had internal issues and could not meet up with set standard.
	  o Knowledge sharing between partners was limited by coordination issues.
	  o Some partners did not fully deliver on commitments - *Only 6 institutions completed all phases of the training……. NOUN did not expect that some will not complete the training (NOUN, Nigeria, Female)*
	  o *"General ICT knowledge was a major challenge which prompted the creation of a support platform (Project Technical Lead, male)"*
	  o The lack of NUC involvement to support institutionalization in Nigeria
	• GTEC identified the lack of a national policy in Ghana on Blended Learning, as a major constraint, and while some had policies they often lacked the necessary infrastructure. *"What was lacking from GTEC, we did not have any bench mark which we could say the policy meet standard or does not". (GTEC, Ghana)*
	• 5 out of 10 PSC respondents mentioned that disparities in infrastructure between universities was a significant challenge eg: *"challenges in online learning encountered in other universities" (Nigeria, Male). "If one university in Ghana has this number of studio labs, we also should have" (Nigeria, Female). "We are all at different levels …….."(Ghana, Male)*
		• Implementation Partners interviews
		
		• Implementation Partners interviews
		
		• PSC Interviews

• Will this be sustained after the end of the programme?	• Both NOUN and GTEC are confident this will continue after the end of the programme because the LMSs are functioning, and the universities have been empowered. But that that sustainability will depend on institutions and regulators providing ongoing support. *"It would have been rewarding if ACU can work with NUC to strengthen the activities" (NOUN, Nigeria, Female)*
	• PSC respondents mentioned the following as lasting impact from the PEBL WA in their universities, to ensure sustainability, depending on institutional context:
	  o 5 PSC respondents mentioned continued institutional support and infrastructure will ensure sustainability eg: *"BL has come to stay in my university" (Nigeria, Male).*
	  o A respondent mentioned policy development will ensure sustainability eg: *"Senate approved BL policy and will go a long way in the development of the university. So Impact becomes progressive and permanent" (Nigeria, Male).*
		• Implementation Partners interviews
		
		• PSC Interviews

	• 4 out of 10 respondents mentioned continuous capacity building will ensure sustainability eg: *"Initially we just had the system but we did not develop the capacity to use the system, but that is what PEBL WA has done. We have embraced it. We will continue to implement what we have been taught…….we need to constantly train facilitators in KSTU" (Ghana, Male).*	• PSC Interviews
2. Staff in partner universities trained and posting courses on OER Africa Were the expected activities delivered: • Staff trained. • Staff posting courses. or something else? [Log frame indicators: 1: Number of academics trained on the use of technological platforms for sharing courses [with disaggregation by gender and country]; 2 Students' satisfaction with the use of LMS [with disaggregation by gender] (90%); 3 Students' perceived confidence with the use of LMS [with disaggregation by gender] (75%); 4 Academics' satisfaction with the use of technological platforms [with disaggregation by gender] (75%); 5: Academics' perceived confidence with the use of technological platforms [with disaggregation by gender] (75%)].	• The plan envisaged training more than 1000 academics. • University of New South Wales selected to provide training on OER in Yr1. • Needs assessment and training of c. 100 academics in use of LMS (Moodle) and creating videos and facilitating online courses completed by NOUN. ACU survey in August 2022 found 96% trainees satisfied of very satisfied and 94% felt confident to use the platforms. Participant feedback included *"The training has enhanced my knowledge of blended learning, equipped me with the skills required for online facilitation, creation of utilisation of teaching and learning resources such as instructional videos, labels, files and scrolling marquee';* and *'NOUN PEBL training has resulted in better learning results, flexible access, a feeling of community, efficient resource usage, and satisfied students.* • Online seminar on open education resources by UNSW Australia on 'Using and Designing Open Educational Resources (OER). 93% participants were satisfied or very satisfied with the training. Around 50% of those surveyed noted that it was a 'skill booster'. • SEDA online Developing Blended Learning course delivered to 36 academic staff from partner institutions. NOUN trained 100 in LMS and online learning. CoL trained QA personnel on the QA Rubric and QA Review Tool. • Over 3,000 lecturers and 4,000 students have been trained. SEDA online Developing Blended Learning course successfully delivered to academic staff from partner institutions. CoL trained QA personnel and content developers on the QA Rubric and QA Review Tool. NOUN trained 342 academics and 26 non-academics in first phase of which 92 also completed the second phase and have trained 935 additional colleagues. • Final online module of 1st phase training on LMS held by NOUN btw Sept and Nov bringing total No trained to 342 academics and 26 non-academics. 92 academics and 9 IT officers trained as trainers in Phase 2 who then trained 935 academics and 3800 students. • Trainers trained by SEDA have trained 952 additional lecturers in blended learning. Senior leaders feel that the trainings have increased awareness and knowledge among academics (and students) about approaches and tools for blended learning especially appreciated the shift from traditional teaching to a more 'student-centred' approach. 83% of trainees were either 'satisfied' or 'very satisfied' with the trainings. Over 91% noted that it has increased their willingness and ability to use their Learning Management System. • Given the success of the NOUN training and local cascade, ACU invited partner universities to apply for additional funding to train staff from other universities. A further 102 academics from 12 other universities were trained. • NOUN trained 11 partner institutions, (University of Lagos did not participate) and only 10 (83%) qualified and met thresh hold, skilled enough to cascade training. 368 academic staff enrolled and 228 participants (more than 50%) completed the training on online facilitation and use of learning management systems in the first phase. Qualified participants were certified. Out of the 10, only 9 institutions qualified for phase 2 training. 9 partner institutions trained over 4,000 students in their institutions. Kwame Nkrumah University of Science and Technology (KNUST) did not advance to cascade phase of the training - *"We achieved results, NOUN as trainer had good results and measurable indicators" (NOUN, female)* • NOUN's ED explained that the plan was to train a target of 400 participants in the first phase. Participants that qualified for second phase were certificated. Institutions trained their colleagues and students. 11 institutions were to cascade the training to 100 lecturers in their institutions, about 1100 lecturers in total. Each institution was to train 500 students. Other non-partner institutions were also trained. *"but the partner institutions were not able to provide the 400 participants……..."(NOUN, Nigeria, Female).* • ACU said that partner universities training staff in other universities was an unexpected outcome – *"Some universities were not using their training budget. Some did no cascade training. [ACU] wanted to use the money for training. Offered training to non-partner universities. Cascade training had more or less finished by August 2023 so asked partner universities if they would like to train others. 7 did." (ACU)"* • SEDA mentioned the strength of the community of trainees was an unexpected outcome *"[this was] partly because of the re-selection process, but also the very strong team-building atmosphere in the Abuja workshop. As a part of the deliverables of the*	• DFAT Proposal • DFAT Milestone report 21-22 • DFAT Milestone report 21-22 • DFAT Milestone report 21-22 • PEBL Narrative report 21-22 • PEBL Narrative report 22-23 • PEBL Narrative report 22-23 • DFAT Milestone report 22-23 • DFAT Milestone report 22-23 • Implementation Partners interview • Implementation Partners interviews • Implementation Partners interviews • Implementation Partners interviews

programme, teams were required to organise local workshops in their own/neighbouring universities; in several cases, they used part of their budget to "import" people from (an)other partner institution(s) to support the home team in their workshops" (SEDA).

- SEDA also mentioned that *"Influencing the influencers workshops which both raised the profile of the trainers as well as strengthening interest in blended learning across the universities"* (SEDA).

From the interviews and forms the PSC submitted, 15 Courses are posted on OER Africa by 12 institutions. 6 courses posted by Nigerian Universities; 9 courses posted by Ghanaian universities (ANU posted 4 courses) - https://www.oerafrica.org/partnership-enhanced-and-blended-learning-pebl-west-africa

- PSC respondents mentioned that staff in the partner universities were trained to repurpose their courses, and went on to train other staff in BL.eg: *"30 staff also attended the intensive NOUN PEBL WA training….through PEBL, over 600 people have been trained in UI." (Nigeria, Female)*

- All of the SoC submitted by partner universities describe the scale of the training eg:
  - Over 500 academic staff and 5000 students directly benefited from these programs, acquiring compelling and invaluable skills during the programme (Nigeria).
  - 3 academic faculty were selected to participate in the Developing Blended Learning (DBL4) course [they then ran] three rounds of training on repurposing of course modules for blended learning for selected faculty from every academic unity of the university (Ghana).
  - 4 staff were trained in repurposing the current face-to-face curriculum [who then trained] 34 other faculty members with nine courses repurposed into blended learning mode; the 4 staff members trained on the Online Management System training 260 other staff (188 males and 72 females) and 1055 students (624 males and 431 females).

  And its value:
  - [the training] This awareness laid the groundwork for a paradigm shift in the way teaching and learning were perceived at the institution (Nigeria)
  - An online workshop in February proved particularly insightful. I learned to enhance course learning outcomes with effective activities for engagement and assessment tasks (Ghana)
  - In summary, the DBL4 programme has not only advanced my teaching methodologies but has significantly contributed to my career development (Ghana).

- 50 out of 58 (86%) of the staff who responded to the survey said they had received training from PEBL of which 41 (82%) had received training in producing blended learning materials, 43 (86%) on using the LMS, 32 (64%) on posting materials, 28 (56%) on using QA materials, and 34 (68%) on approaches to institutionalising blended learning. 48 (91%) received online training, 31 (58%) face-to-face training, and 22 (42%) through the provision of training materials. There was no significant difference between men and women. All said the training was good, with 28 (53%) rating it excellent, 23 (43%) as very good and 2 (4%) as good. There was very little difference between the number of men, between Nigeria and Ghana or between role and job level.

- 48 (91%) of the staff responding to the survey said they had been able to put it into practice, again with very little difference between men and women, country, role or job level. Of those:
  - 18 (37%) said they had delivered online lectures and assessments eg – *"I adopted the blended approach in the delivery of lectures in the past academic year. (Ghana, Male)". "I now use blended learning to deliver the courses I teach. I use online applications such as Zoom, Google Classroom, YouTube, and LMS to deliver and facilitate teaching and learning engagement. (Nigeria, Male)." "Teaching weekend students online with a pre-prepared study materials and videos. (Ghana, Female)".*
  - 12 (25%) said using the LMS eg – *"I now instructional video materials and post it to my students via LMS. It has been helpful and we have witnessed dramatic improvement from the student's. (Nigeria, Male). I use CANVAS and other LMS tools. (Ghana, Male)"*
  - 12 (25%) said training other staff eg – *"I have cascaded the design and development/repurposing of the university courses to more than 140 other academic staff in my university. (Nigeria, Female). I have extended blended learning training to over 250 teaching staff and over 3,000 students of Kumasi Technical University, and to over 90 teaching staff of 9 other universities in Ghana. (Ghana, Male)"*
  - 8 (13%) said by repurposing courses eg – *"I have repurposed all my courses to blended learning, uploaded them to the university's learning management system. Feedback from students are very encouraging. (Ghana, Male). I have repurposed*

	• Implementation Partners interviews
	• PSC Interviews
	• PSC Interviews
	• Story of change
	• University staff survey
	• University staff survey

two courses and I have trained colleagues in repurposing courses to Blended Learning format. (Ghana, Female)."

- o 8 (13%) said by creating online materials eg – "*I am a IT support Staff, I assist Lecturers in preparing their lecture material for online learning. Thus creating interactive materials. (Ghana, Male). I've applied the training on course outlines to my current courses, doing of PowerPoint presentation and videos has also helped. (Ghana, Female)".*

- ALL 12 LECTURERS FROM PARTNER UNIVERSITIES IN GHANA PROVIDED POSITIVE FEEDBACK ON SKILLS GAINED TO ENHANCE BL AND ONLINE TEACHING FACILITATION. E.G. "*THIS SEMESTER ALONE WE HAVE TRAINED 400 FACULTY MEMBERS*". (MALE, KNUST) "*IN THE PREVIOUS SEMESTER, WE HAD A HIGH FAILURE RATE IN MY COURSE AMONG SECOND-YEAR STUDENTS. HOWEVER, IN THE LAST SEMESTER, USING THE BL APPROACH, NONE OF THEM FAILED*". (MALE, UHAS)

11 (90%) OUT 12 LECTURERS FROM PARTNER UNIVERSITIES IN GHANA SAID THEY USE THE MOODLE LEARNING MANAGEMENT SYSTEM. Eg "*WE HAVE TRANSITIONED TO ONLINE TEACHING, AND IT IS MANDATORY FOR LECTURERS TO UPLOAD THEIR LECTURES ONTO THE MOODLE PLATFORM AND DELIVER THE COURSE THROUGH IT*". (FEMALE, KSTU). "*BEFORE THE INTRODUCTION OF THE PEBL PROGRAMME, WE USED TO CONDUCT NORMAL CLASSES ON PLATFORMS LIKE ZOOM AND WHATSAPP, ESPECIALLY DURING THE COVID ERA. HOWEVER, WITH THE IMPLEMENTATION OF BLENDED LEARNING, WE HAVE TAKEN A STEP FORWARD IN MAKING TEACHING AND LEARNING MORE CONSIDERATE AND FLEXIBLE, PARTICULARLY IN TERMS OF LESSON DELIVERY VIA THE MOODLE LMS*". (MALE, ANU)

- 8 OUT OF 12 (60%) PARTNER LECTURERS HAD EITHER: REDESIGNED THEIR COURSES AND WERE AWAITING QA APPROVAL TO UPLOAD THEM TO THE MOODLE LMS, OR WERE IN THE PROCESS OF REPURPOSING THEIR COURSES FOR BL DELIVERY. Eg: "*I HAVE BEEN ABLE TO REPURPOSE MY MATERIALS FOR BOTH ONLINE AND BLENDED LEARNING SETTINGS*". (FEMALE, KNUST). "*AS PART OF OUR PILOT PROGRAMME, WE HAVE IMPLEMENTED A TWO-WEEK VIRTUAL TEACHING PERIOD FOLLOWED BY TWO WEEKS OF IN-PERSON LESSON DELIVERY*". (FEMALE, KSTU). "*I HAVE REPURPOSED SOME OF MY COURSES FOR BL AND YET OTHERS, MAY BE NEXT SEMESTER.*" (MALE, KSTU). "*I HAVE DEVELOPED LEARNING RESOURCES FOR MY CLASSES. HOWEVER, DUE TO WORK CONSTRAINTS, I HAVE NOT BEEN ABLE TO UPLOAD THEM TO THE LMS*". (FEMALE, ANU)

- 20% (1 OF 5) OF THE LECTURERS IN NON-PARTNER INSTITUTIONS IN NIGERIA REPORTED THAT THE TRAINING RECEIVED HAS IMPROVED THEIR ABILITY TO CREATE QUALITY ONLINE CONTENT E.G. "*THE PEBL TRAINING HAS ENHANCED THEIR ABILITY TO DEVELOP AND DELIVER HIGH QUALITY ONLINE AND BLENDED MATERIAL (NON-PARTNER LECTURER, MALE, NNAMDI AZIKIWE UNIVERSITY)*"

11 of the 17 students who responded to the survey (65%) had received some training in accessing blended learning. The most frequent types of training mentioned were:

Use of LMS – and other online platforms (6) eg: "*Use of LAUTECH LMS*" (Nigeria, Female)

Recorded tutorials on the LMS (2) eg: "Recorded tutorials on how to use the online materials." (Ghana, Female)

On blended learning and how people learn (2) eg: We were taught "Blended Learning" and what it means how it works and the need. More so, we were taught the difference between online learning and Blended learning." (Nigeria, Male)

- ALL STUDENTS INTERVIEWED IN NIGERIA (100%) HAD RECEIVED SOME TRAINING IN RELATING TO THE LMS AND ONLINE LEARNING MANAGEMENT. THE MOST FREQUENT TYPES OF TRAINING MENTIONED WERE:
  - o ACCESSING AND NAVIGATING THE LMS (4 – 50%) E.G. "*THROUGH THIS TRAINING, I ACQUIRED ESSENTIAL SKILLS IN EFFICIENTLY NAVIGATING THE LMS PLATFORM, ACCESSING COURSE MATERIALS, AND PARTICIPATING IN ONLINE ACTIVITIES (STUDENT, FEMALE, FUNAI)*".
  - o USE OF THE LMS TO CREATE LECTURE MODULE, ASSESSMENT AND STORYBOARDING (3 – 38%) E.G "*I GAIN THREE SKILLS; LITERACY ASPECT, THAT IS HOW TO ACCESS THE LMS HOW TO CREATE COURSE ON THE PLATFORM AND HOW TO MAKE THE COURSE CREATED ACCESSIBLE TO THE PUBLIC (STUDENT, MALE, UI)*
  - o MANAGEMENT OF ONLINE LEANING, SELF-MOTIVATION, CRITICAL THINKING AND EFFECTIVE COMMUNICATION (2 -25%)E.G "*TIME MANAGEMENT, FLEXIBILITY, SELF-MOTIVATION, IMPROVED CONFIDENCE(STUDENT, LAUTECH, FEMALE)*

- STUDENTS FROM PARTNER UNIVERSITIES IN GHANA REVEALED TRAININGS WERE OPEN TO SELECTED UNDERGRADUATE AND POSTGRADUATE STUDENTS NOMINATED BY PARTNER INSTITUTIONS; AIMED TO EQUIP STUDENTS WITH SKILLS TO PARTICIPATE EFFECTIVELY IN BL COURSES AND LIFELONG BLENDED LEARNING. E.G. "*WE HAD A WEEK-LONG PHYSICAL SESSION AND ANOTHER WEEK-LONG ONLINE FOR STUDENTS, FACULTY AND DEPARTMENTAL STAFF. WE JUST HAD A FEW SELECTED STUDENTS, AND ANOTHER DAY WE JOINED THE WHOLE CLASS TOGETHER FOR THEM TO PARTICIPATE ON HOW THEY WILL GO BLENDED LEARNING*". (MALE, KSTU)

- 7 OUT OF 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA REPORTED SATISFACTION WITH TRAINING QUALITY AND FURTHER INDICATING IT INCREASED THEIR WILLINGNESS AND ABILITY TO USE LMS. E.G. "*I WOULD SAY THE QUALITY WAS FAIR BECAUSE THERE WERE OFTEN INTERNET CONNECTIVITY CHALLENGES THAT CAUSED BREAKAGES DURING LECTURES ON THE VIRTUAL CLASSROOM PLATFORM. DUE TO INTERNET ISSUES,*

Right column source references:
- LECTURER INTERVIEWS GHANA
- LECTURER INTERVIEWS GHANA
- LECTURER INTERVIEWS GHANA
- LECTURER INTERVIEWS NIGERIA
- Student survey
- STUDENT INTERVIEWS IN NIGERIA
- STUDENT INTERVIEWS GHANA
- STUDENT INTERVIEWS GHANA

	WE SOMETIMES STRUGGLED TO EVEN UPLOAD ASSIGNMENTS ON TIME". (MALE, KNUST) "*THE WORLD IS GOING INCREASINGLY DIGITAL. IT'S NO LONGER NECESSARY TO SOLELY RELY ON PHYSICAL CLASSROOM INTERACTIONS WITH LECTURERS TO LEARN. I WOULD LIKE KNUST AUTHORITIES TO MORE WIDELY ADOPT BL*". (MALE, KNUST). "*THIS APPROACH IS REALLY GOOD. I'M STARTING MY MASTER'S DEGREE ON CAMPUS. IF THIS APPROACH IS APPLIED IN OUR TEACHING AND LEARNING, I THINK IT WILL BE GOOD*". (MALE, STU) • SOME TRAINED STUDENTS FROM PARTNER UNIVERSITIES IN GHANA WENT ON TO TRAIN OTHER STUDENTS. E.G. "*LAST SEMESTER WE HAD A TRAINING, FACULTY AND DEPARTMENTAL LEVELS; AND I WAS EVEN PART OF THE TEAM WHO WERE FACILITATING THAT*". (MALE, KSTU).	• STUDENT INTERVIEWS GHANA

• How and how much did they contribute to the outcome?	• ACU, SEDA and CoL all felt that the quality and approach to the training contributed to the programme's success:
	  o ACU mentioned the cascade training – *"[which was] learned from PEBL-EA and incorporated in the proposal this enabled us to achieve the big target numbers – many of which were exceeded. Some universities took it up better than others. The LMS training was the most popular"* (ACU).
	  o SEDA mentioned the "Carpe Diem" influencing the influencer training "*This provided an opportunity for the PEBL participants to reinforce what they had learned and develop and practice their training skills, which contributed substantially to a) the quality of subsequent cascade training (in their own and neighbouring institutions) using the Carpe Diem approach and b) the skills and qualification of the trainees*". (SEDA)
	  o CoL mentioned good programme management - *"Good coordination and clear roles for all of the technical partners and clear guidelines, comprehensive and timely review meetings and regular PSC meetings all contributed to the emergence of a strong network of partner university staff who are collaborating beyond just PEBL work"* (CoL)
	 • 4 of the 5 SoC submitted by partner universities said the training was excellent eg – *"The lessons were structured so the participants could learn at their own pace. (Male, Ghana)"*. *"PEBL was very insightful, informative and interesting. The resource persons are full of knowledge and impacted the information needed." (Female, Nigeria).*
		• Implementation Partners interviews
		
		 • Story of Change

• What were the challenges?	• "The main challenges were unstable internet connectivity and increased workload. The programme has provided funding to participants to offset data costs. However, this is a temporary solution and much more needs to be done, both at the institutional and systems level, to address the issue of insufficient internet infrastructure".
	 • PSC respondents mentioned internet connectivity and infrastructure as a challenge eg: "*Technological hitches, internet, power supply". (Ghana, Male).*
	 • 3 of the 5 SoC submitted by non-partner universities had suggestions for how the training could be improved eg – *"A few participants were new to the platform and could not have benefited much because they had to learn and practice a lot within the shortest possible time.*
	 • Only 8 (15%) staff responding to the survey said they had not been able to put the training into use. The reasons they gave were:
	  o 2 (25%) said that it is not yet policy or mandatory eg – "It's due to the faculty policy (not fully ready) (Nigeria, Male)". *"Not yet mandatory (Ghana, Male)".*
	  o 2 (25%) said it was because students lack access to internet or devices eg – *"All the students need good Internet facility to be able to do it. (Nigeria, Female). Students lack laptops (Ghana, Male)"*
	  o 1 (12%) said it was not relevant because "*Because it's more suitable for lecturers. (Nigeria, Female)*
	  o 1 (12%) said the course was suitable for their course – "*In the school of medicine, an integrated curriculum is run, it is made up of several components with different content experts. It is therefore necessary for more of the faculty to be trained on the blended learning. (Ghana, Male)"*
	 • 1 (12%) because of lack of management support – "*There is no support from the institution management. There is no motivation from the management. (Nigeria, Male)"*
	 • 9 OF THE 10 LECTURERS FROM NON-PARTNER UNIVERSITIES IN GHANA BEMOANED THE CHALLENGE OF TRAINING OTHER LECTURERS ALONGSIDE THEIR REGULAR ACADEMIC CALENDAR WHEN THEY ARE BUSY TEACHING, ASSESSING, AND CONDUCTING RESEARCH. "*THE ONLY PROBLEM I HAD WAS THAT THE TIMEFRAME WASN'T OKAY, AND HOW IT WAS SCHEDULED WAS A PROBLEM. AND SO, MOST OF THE SESSIONS I COULDN'T JOIN".* (FEMALE, STU)
	 • The most frequently mentioned challenges to blended learning in the student survey were:
	  o Poor access to the internet (10) eg: *"Accessing the internet was very challenging at certain times." (Ghana Female)*
	  o Lack of devices to access the internet and LMS (3) eg*: "Not all students have access to the necessary devices, creating a*
		• DFAT Milestone report 21-22
		
		 • PSC Interviews
		
		 • Story of Change
		
		 • University staff survey
		
		 • University staff survey
		
		 • LECTURER INTERVIEWS GHANA
		
		 • Student survey

	digital divide". (Nigeria, Male) - The need for new software to access the LMS etc (2) eg: *"The software/applications used were new to students, they therefore couldn't take full advantage of it." (Ghana, Male)* - Unreliable power supply at home and in the university (2) eg: *"Another factor is the poor network coverage and poor power supply in my school's location." (Nigeria, Female)* - ALL 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA CITED UNRELIABLE INTERNET CONNECTIVITY ISSUES AS HAMPERING ACCESS DURING TRAINING LIVE CLASS SESSIONS. OTHERS ALSO CITED INSUFFICIENT COMPUTERS OR DEVICES TO DO HANDS-ON ACTIVITIES SIMULTANEOUSLY AS A MAJOR CHALLENGE. E.G. *"SOMETIMES, WHEN CLASS IS ON AND THE TEACHER ASKS YOU A QUESTION, THE INTERNET MESS UP BEFORE YOU COULD EVEN ATTEMPT TO ANSWER"*. (FEMALE, UHAS) 2 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA WERE FROM EXCLUDED AS THEY INDICATED THEY WERE NOT ABLE TO PARTICIPATE IN THE BLENDED LEARNING TRAINING PROGRAMME DUE TO LIMITED SLOTS. E.G. *"I WAS EAGER TO PARTICIPATE IN THE TRAINING BUT WAS TOLD THE SLOT WAS FULL"*.	- STUDENT INTERVIEWS GHANA - STUDENT INTERVIEWS GHANA
Will this be sustained after the end of the programme?	- ONE STUDENT FROM KNUST EXPLAINED THAT THE UNIVERSITY HAS AN ESTABLISHED E-LEARNING CENTRE DEDICATED TO SUPPORTING DIGITAL TEACHING AND LEARNING TRANSFORMATION. THE TWO STUDENTS INTERVIEWED BELIEVE THIS WILL SUSTAIN BL IN THE UNIVERSITY. E.G. *"BEYOND THE PEBL PROGRAMME, THE UNIVERSITY IS ACTIVELY INVESTING IN ONGOING TRAINING TO PROMOTE BL ADOPTION"*. (FEMALE, KNUST). - ANOTHER STUDENT FROM KSTU IN GHANA DESCRIBED HOW AN INSTITUTIONAL INVESTMENT IN AN E-LEARNING CENTRE AND REGULAR TRAININGS CAN DRIVE BLENDED LEARNING IMPLEMENTATION WITH PERMANENCE. E.G. *"I WOULD LOVE TO SEE BL WIDELY ADOPTED IN KSTU ESPECIALLY AS KSTU HAVE A LIMITED OR INADEQUATE INFRASTRUCTURE ON CAMPUS AND STUDENTS ARE MORE THAN THE CLASSROOMS"*. (MALE, KSTU)	STUDENT INTERVIEWS GHANA
3. Increased capacity to support pedagogical approaches for blended learning [Log frame indicators: 1: Number of academics with enhanced capacity to support educational development [with disaggregation by gender and country]; 2 Number of Higher Education Institutions that that have institutionalised capacity strengthening in blended learning pedagogy (disaggregated by institution and country); 3: Number of individuals with enhanced capacity to teach blended learning courses [with disaggregation by gender and country]	- The plan envisaged that over 5000 students would receive training in the use of online tools and 3000 students with the soft skills necessary to be employable. - The plan envisaged that the universities Virtual Learning Environments (VLE) and Learning Management Systems (LMS) would be strengthened. - The plan envisaged adopting "A training-of trainer (ToT) model will be adopted to facilitate a multiplier effect and train a high number of academics). 36 staff (3 from each university) received online training in developing blended learning from SEDA in November 2021. 92% of respondents. were either 'satisfied' or 'very satisfied'. Feedback included " *I have learnt to develop a course module, design and use e-tivities, improved my use of technology in teaching, improved my level engagement with my students and colleagues, improved my overall professional output as a lecturer'*. 30 of them then had face-to-face training in Abuja in July 2021. *"On reflection, the decision to hold the workshop in Abuja was pivotal in the bonding process.* This was followed by further online training of participants as trainers who could then train others in March 2022. "By July 2023 by July 2023, all 11 partner universities, except First Technical University, Ibadan, had successfully run at least one cascade training in their respective institutions and trained a total of 952 (M:585 and F: 367) academics in the process". - The plan envisaged that > 100 university staff would be trained as leaders to support their colleagues in the effective design and delivery of teaching learning and assessment materials for blended learning. - The plan envisaged involving the national accreditation bodies in both countries. - Discussions to involve national commissions not very successful though GTEC agreed to join as a partner to undertake a study. AUC recognised that more direct engagement with the NEC would have been helpful. - NOUN staff interviewed said that survey results taken during and after the training programme showed positive outcomes and engagement from the academic staff who participated. *"The result of the survey carried out during and after the training was also a testimony to the success of the training* (Project Administrator – Administrative, female)." - NOUN ED said that they trained 368 participants were trained in development and delivery of blended learning courses across partner universities in Nigeria and Ghana - NOUN ED mentioned that NUC involvement could have further strengthened institutionalization in Nigeria.	- DFAT Proposal - DFAT Proposal - DFAT Proposal - DFAT Milestone report 21-22 - DFAT Milestone report 22-23 - DFAT Proposal - DFAT Proposal - DFAT Milestone report 21-22 - Implementation Partners interviews - Implementation Partners interviews - Implementation Partners interviews

	• Both NOUN and GTEC senior staff mentioned that Policies, units, and infrastructure were established to institutionalize educational development capacities.	• Implementation Partners interviews
	• PSC respondents mentioned pedagogical support was provided eg: *"Pedagogical tools, we worked with SIDA and this exposed us to a lot of pedagogical tools that can be used to teach online and for BL."(Ghana, Male)*	• PSC Interviews

	• PSC respondents mentioned some measures put in place for sustainability after the programme:
	   ○ Policy implementation: *"We have a blended learning policy, online content must not be less than 30%." (Nigeria, Male).*
	   ○ Policy implementation: *"The university senate approved it and that led to the decision on 100L students to be taught online and also buying of millions of naira worth of gadgets" (Nigeria, Male)*
	   ○ Improved structures: eg: *"BL unit established now, with coordinators and team that train other staff".(Nigeria, Male)*
	   ○ The Ghanaians mentioned incentives to staff e.g: Incentive for promotion: *"So we use as research incentive and count toward promotion as incentive"(Ghana, Female) "We …….give awards to staff who use the BL approach".(Ghana, Male)*
		• PSC Interviews

	• Interviews with PSC members identified several approaches to improve policy to support blended learning e.g The Nigerian universities mentioned they are to introduce BL to first year students and Ghanaian universities said they will offer more course in BL:
	   ○ *"university approved 100L students to start online lecture by January/February".(Nigeria, Male)*
	   ○ *"we follow the policy, by 2024 we start implementing at different levels with the 100 level to go virtual."(Nigeria, Female)*
	   ○ *"We will be able to offer more courses through BL" (Ghana, Male).*
		• PSC Interviews

	• Partner institutions are also cascading the training eg: *"The university is ensuring that the trainings are cascaded in all the departments" (Nigeria, Female)*	• PSC Interviews

	• The SoC submitted by partner universities describe many approaches to institutionalise blended learning eg:
	   ○ *The trainees engaged with management of the university including Deans and Directors of Schools and Institutes to educate them on Blended Learning and how [the university] can position itself to adapt it as a mode of teaching and learning (Ghana).*
	   ○ *The internet infrastructure has been increased from 120 Mbps to 650 Mbps for seamless delivery by teaching staff...students are provided limited monthly data to support their online academic activities.... a help desk was also created to provide technical and related assistance for staff and students (Ghana)*
	   ○ *The high level of enthusiasm generated throughout the university by the PEBL West Africa programme has resulted in the development of a Blended Learning Guideline for the university duly approved by the University Council and acquisition of relevant equipment from other sources to support blended learning (Ghana).*
		• Story of Change

	• Many of the SoC submitted by partner universities describe the quality and range of pedagogical training provided eg:
	   ○ *The adoption of constructivism and phenomenography from DBL4 transformed my teaching approach, making classes more engaging and interactive. Encouraging students to reflect on their experiences and connect them with theoretical concepts has become a regular practice (Ghana)*
	   ○ *The course took about nine months to complete... it focused on pedagogy and practical aspects of course design and training on how to repurpose current course modules....*
	   ○ *the NOUN training focused on content delivery via the Virtual Learning Environment (VLE) / Learning Management System (LMS) (Ghana)*
		• Story of Change

	• ALL (100%) RESPONDENTS FROM THE PARTNER UNIVERSITIES IN NIGERIA INDICATED THEY HAVE RECEIVED TRAINING THROUGH PEBL, SPECIFICALLY THROUGH THEIR IMPLEMENTING PARTNER, NATIONAL OPEN UNIVERSITY (NOUN). THEY RATED THE QUALITY OF THE TRAINING RECEIVED "GOOD" WITH DIVERSE REASONS E.G. *"THEY WERE OPEN TO COMMUNICATION, WELL ORGANISED AND THE FACILITATORS ARE EXPERT IN THEIR FIELD (PARTNER LECTURER, FEMALE, UNIVERSITY OF IBADAN)"*, AND THAT THE TRAINING RECEIVED FROM PEBL-WA HAS MADE AN IMPACT ON THEIR ABILITY TO DEVELOP AND DELIVER QUALITY ONLINE AND BLENDED LEARNING MATERIALS:
	   ○ 64% (7 OF 11) FOUND THE TRAINING RECEIVED ON LMS, ONLINE ASSESSMENT AND STUDENT ENGAGEMENT USEFUL IN THEIR IMPLEMENTATION OF BLENDED LEARNING E.G. *"THE TRAINING ON LMS, STUDENT ENGAGEMENT, AND THE DELIVERY OF INSTRUCTIONAL MATERIAL (PARTNER LECTURER, FEMALE, EBONYI STATE UNIVERSITY)"*
	   ○ 45% (5 OF 11) REPORTED IMPROVEMENT OF KNOWLEDGE AND WIDE EMBRACEMENT OF BLENDED LEARNING IN THEIR INSTITUTION E.G. *"IT HAS BROADENED THE KNOWLEDGE ON BLENDED LEARNING AND THERE ARE CHANGES AND WILLINGNESS OF LECTURERS TO EMBRACE BLENDED LEARNING (PARTNER LECTURER, FEMALE, LAUTECH)"*
		• LECTURER INTERVIEWS NIGERIA

- o 27% (3 OF 11) REPORTED THE ADOPTION OF BLENDED LEARNING APPROACH DUE TO ITS FLEXIBILITY AND COST EFFECTIVENESS, CONSIDERING THE CURRENT ECONOMIC SITUATION OF THE COUNTRY E.G. "*PRESENTLY WITH THE INTEREST THAT STUDENT CAN STAY AT THE COMFORT OF THEIR HOME TO RECEIVE LECTURE HAS BEEN A COMMENDABLE IMPROVEMENT. ALSO, CONSIDERING THE COST OF TRANSPORTATION THESE DAYS (PARTNER LECTURER, MALE, EBONYI STATE UNIVERSITY)*"
  - o 36% (4 OF 11) FOUND OTHER AREAS LIKE DESIGN THINKING, BLENDED LEARNING USEFUL E.G. "*I ATTENDED TWO TRAINING ON BLENDED LEARNING AND THE TRAINING WAS ON DEVELOPING PEOPLE AND ENHANCING PRACTISING AND AREAS COVERED WERE DESIGN MODULE BLUEPRINT, CREATE ACTION PLAN AND DEVELOPING COMPETENCY (PARTNER LECTURER, MALE, FIRST TECHNICAL UNIVERSITY)*"
  - o 28% (3 OF 11) EITHER MENTION HIGH LEVEL OF PREPARATION REQUIRED BEFORE LECTURE OR ABILITY TO OPERATE THE LEARNING MANAGEMENT SYSTEM (LMS) AS A FORM OF IMPROVEMENT FOLLOWING THE PEBL TRAINING E.G. "*MORE INTERESTING BECAUSE OF THE HIGH LEVEL OF PREPARATIONS REQUIRED BY THE LECTURERS BEFORE APPROACHING THE LEARNERS (PARTNER LECTURER, MALE, UNILAG)*"

- ALL THE INTERVIEWED RESPONDENTS (100% - 5) FROM THE NON-PARTNER INSTITUTION IN NIGERIA AGREED THAT THE TRAINING RECEIVED FROM PEBL-WA HAS MADE AN IMPACT ON THEIR ABILITY TO DEVELOP AND DELIVER QUALITY ONLINE AND BLENDED LEARNING MATERIALS E.G. "*YES, … AFTER THE E-FELLOWSHIP A LOT WENT TO SLEEP BUT THE PEBL PROGRAMME BECAME A WAKEUP CALL. INTERNAL TRAINING-THE-TRAINER PROGRAMME WAS ORGANISED. CURRENTLY 30 LECTURERS HAVE BEEN TRAINED (NON-PARTNER LECTURER, MALE, UNIV. OF JOS)*".
  - o 80% (4 OF 5) REPORTED INCORPORATION OR IMPLEMENTATION OF THE BLENDED LEARNING APPROACH INTO THEIR TEACHING E.G. "*PERSONALLY I HAVE BEEN ABLE TO IMPLEMENT BL IN SOME OF THE COURSES I LECTURE AND SOME OTHER COLLEAGUES HAVE ALSO WALK IN THE SAME DIRECTION(NON-PARTNER LECTURER, MALE, MICHAEL OKPARA UNIVERSITY OF AGRICULTURE)*", WHILE
  - o 60% (3 OF 5) STATED THAT ALL ASPECTS OF THE TRAINING WERE USEFUL TO THEIR IMPLEMENTATION OF BLENDED LEARNING E.G. "*ALL ASPECT, ESPECIALLY THE MODELS OF BL AND HOW TO FORMULATE THE LEARNING OUTCOMES. ANOTHER INTERESTING PART OF THE TRAINING IS ETIQUETTE AND GOOD COMMUNICATION, THEY WERE MASTERPIECE (NON-PARTNER LECTURER, FEMALE, UNIZIK)*"
  - o 20% (1 OF 5) REPORTED CASCADED TRAINING IN THE INSTITUTION E.G. "*IMMEDIATELY AFTER THE TRAINING, UNIZIK ORGANIZED A TRAINING SESSION FOR STAFF OF THE SCHOOL ESPECIALLY THE POSTGRADUATE LECTURERS IN THE SCHOOL (NON-PARTNER LECTURER, MALE, UNIZIK)*"

- LECTURERS IN 3 OUT OF THE 6 PARTNER UNIVERSITIES IN GHANA SAID THEY ARE LEVERAGING PARTNERSHIPS TO CASCADE BL CAPACITY BUILDING, SPECIFICALLY FOCUSED ON TRAINING ADDITIONAL STAFFS AT AFFILIATED SCHOOLS. THIS INDICATES EFFORTS TO PROMOTE SUSTAINABLE SCALE-UP OF BL PRACTICES THROUGH COLLABORATIVE NETWORKS. THEY ALSO EXTENDED TRAINING TO MANAGEMENT. E.G. "*KNUST HAS A NUMBER OF INSTITUTIONS AFFILIATED TO IT. WE'RE TRAINING ALL NURSING TRAINING COLLEGES AND COLLEGES OF EDUCATION IN GHANA AFFILIATED TO KNUST*". (FEMALE, KNUST). "*WE ALSO BROUGHT THE PRINCIPALS THERE, SO THAT THEY WOULD COME AND APPRECIATE WHAT WE ARE EXPOSING THEIR STAFF TO, AND GO BACK AND PUT IN THE INFRASTRUCTURE AND THE ORGANISATION THAT NEEDS TO HELP THIS TO FULLY RUN*". (MALE, KNUST). "*WE PROVIDE ALLOWANCE FOR STAFF WHO ADOPT BL AND WILL CONTINUE TO TRAIN MORE STAFF. WE ALSO PLANNED TO TRAIN MORE SCHOOLS AND STAFF FROM COLLABORATING UNIVERSITIES DURING THE LONG VACATION*". (FEMALE, KSTU).

- 6 OUT OF 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA RATED THE PEBL PROGRAMME'S CONTRIBUTIONS POSITIVELY IN THEIR STUDIES. E.G. "*I REALISED THAT MY GRADES GOT BETTER, AND IT ALSO BECAME MORE PERSONALISED LEARNING THROUGH BL*". (MALE, UHAS)
- RESPONSES FROM STUDENTS IN GHANA INDICATE THERE IS A PEDAGOGIC SUPPORT FOR STAFF TO DESIGN AND DELIVER BL COURSES. E.G. "*3 OF MY COURSES WERE TAUGHT USING THE BL APPROACH. SOME OF THE SPECIFIC COURSES ARE CREDIT MANAGEMENT, RESEARCH METHODS AND RURAL BANKING AND MICROFINANCE. I HAD SOME FACE-TO-FACE AND OTHER PARTS IN ONLINE LEARNING. YES, MOST OF THE TIME I HAD BUSINESS RESEARCH METHODS WHICH WAS ALSO DELIVERED VIA BLENDED LEARNING*". (MALE, KSTU)
- 6 OUT OF 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA EXPRESSED SATISFACTION WITH BL TRAINING FROM PEBL. E.G. "*IT WAS EFFICIENT, VERY GOOD. I FOUND IT VERY EFFICIENT*". (FEMALE, UHAS)
- 7 OF THE STUDENTS FROM PARTNER UNIVERSITIES IN GHANA REVEALED THAT THEY ARE ALREADY ENROLLED IN COURSES DELIVERED THROUGH BL AFTER TRAINING. E.G. "*YES, I'M ALREADY TAKING COURSES USING BL. IT HAS HELPED ME IN PARTICIPATING IN THE STUDIES. AND THEN IT WAS ALSO REALLY ACCESSIBLE SO YOU CAN ACTUALLY STAY IN THE COMFORT OF YOUR HOME AND THEN DO YOUR STUDIES*". (FEMALE, UHAS)
- 3 OF THE STUDENTS INTERVIEWED IN GHANA REVEALED THE EFFORTS OF THEIR UNIVERSITIES TO INSTITUTIONALISE BL BY PROVIDING DEDICATED E-LEARNING CENTRES, FREE WI-FI ACCESS ON CAMPUS AND DATA PACKAGES FOR STUDENTS OUTSIDE CAMPUS. E.G. "*THE UNIVERSITY PROVIDES STUDENTS WITH MONTHLY DATA BUNDLES THOSE OFF-CAMPUS AND A FREE WI-FI ON CAMPUS. ALSO, YOU CAN USE THE COMPUTER LAB OR GO TO THE E-LEARNING CENTRE IF THE NETWORK IS BAD*". (FEMALE, KNUST).

Right column labels:
- LECTURER INTERVIEWS NIGERIA
- LECTURER INTERVIEWS GHANA
- STUDENT INTERVIEWS GHANA
- STUDENT INTERVIEWS GHANA
- STUDENT INTERVIEWS GHANA
- STUDENT INTERVIEWS GHANA
- STUDENT INTERVIEWS GHANA

• What were the challenges?	• Key challenges included communication with and gaining support from senior management, unstable and expensive internet, and delays due to strikes. • Challenges mentioned by NOUN staff included the following: Lack of required devices and Internet-related challenges, including lack of access and instability, hindered the smooth implementation of the programme. Lack of understanding and poor awareness about the training objectives among participants posed a challenge. Institutions dropping out due to financial constraints highlighted resource limitations eg. *"Some institution dropped out probably because of inadequate fund for internet subscription (Project Technical Lead, male)"* • All 10 PSC respondents mentioned internet connectivity and infrastructure as a challenge eg: *"Technological hitches, internet, power supply". (Ghana, Male)*. • 11 OUT OF 12 PARTNER LECTURERS AND 7 OUT OF 10 LECTURERS IN NON-PARTNER UNIVERSITIES INTERVIEWED IN GHANA REVEALED THAT UNRELIABLE AND INCONSISTENT ACCESS TO INTERNET AND POWER HAMPERS THE EXPERIENCE OF BL AND WILLINGNESS AMONG FACULTY TO ADOPT BL APPROACHES. EG *"THE MOST SIGNIFICANT CHALLENGE IS RELIABLE INTERNET CONNECTIVITY"*. • ALL 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA CITED LIMITED ACCESS TO STABLE INTERNET CONNECTION. RELIABLE CONNECTIVITY WAS IMPORTANT FOR ENGAGING IN BL MODELS REQUIRING ONLINE COMPONENTS. E.G. *"THE NETWORK CONNECTIVITY AND ITS ASSOCIATED ISSUES WERE THE CHALLENGING PART OF LEARNING WITH THIS APPROACH"*. (MALE, ANU).	• DFAT Milestone report 22-23 • Implementation Partners interviews • PSC Interviews • LECTURER INTERVIEWS GHANA • STUDENT INTERVIEWS GHANA

• Will this be sustained after the end of the programme?	• All three NOUN staff interviewed expressed confidence in the sustainability of the outcome because:
	  o Of the number of staff trained in participating institutions. *"I am very confident and certain that the programme will be sustained if what the learners have been made to go through can be further implemented in the participating institutions (Project Technical Lead, male)"*
	  o The impact of COVID underscores the need for preparedness, and both partner and non-partner universities express commitment to sustaining changes. *"The experience of COVID teaches us to be prepared at all times. Although both partner and non-partner universities seem committed to sustaining the changes (Project Coordinator – Academic, female)"*
	• INTERVIEWS WITH STUDENTS IN GHANA INDICATES THAT LOCAL OWNERSHIP BY MANAGEMENT AND STRENGTHENING EXISTING INFRASTRUCTURE, BUILDING NEW ONES AND PROVIDING SUPPORTS TO STUDENTS AND STAFF WILL CATALYSE ADOPTION OF BL. *"I WANT MY UNIVERSITY TO ALWAYS DO TRAINING OR DO MAKE SURE THEY CREATE AWARENESS OR THEY TALK MORE BL TO THE STUDENTS, ESPECIALLY THE CONTINUING STUDENTS"*. (MALE, KsTU)
		• Implementation Partners interviews
		
		• STUDENT INTERVIEWS GHANA

4. Strengthened QA systems for blended learning courses
 	
Were the expected activities delivered:
• Review QA systems and regional QA mechanisms.
• Develop and implement QA capacity strengthening plans
[Log frame indicators: 1: Number of action plans being developed [with disaggregation by university and country] (12); 2 Number of Higher Education Institutions applying QA Rubric to blended learning modules
	• The plan envisaged that all modules would be subjected to the internal QA mechanisms of the lead academic institutions.
	• QA review tool launched and reviewed with network members. 33 academics from all 12 universities attended a series of QA training sessions by CoL between April and July 2022. More than 83% were either 'satisfied' or 'very satisfied'.
	• COL trained 56 staff in QA in Blended learning" course (20 received certificates) and "QA in Higher Education in Africa" course (11 received certificates) + courses on the institutional QA tool and QA rubric. QA surveys in partner universities by trainees identified the need for more training. 10 of the 12 universities have developed QA improvement action plans.
	• 9 out of the 10 PSC (90%) respondents mentioned that PEBL-WA contributed to improving QA mechanisms for blended learning at their institution (University of Ibadan said there was no training but QA form was developed) eg: capacity building and training, Guidelines and Benchmarks:
	  o "We had training on QA, we learnt the Rubric to guide our module repurposing" (Nigeria, Male)
	  o "Training of some faculty on QA" (Ghana, Male)
	  o *"COL did QA training, helped developed standard" (Ghana, Female)*.
	• 1 PSC respondent highlighted the establishment of a team and directorate of QA within university to monitor the progress of blended learning initiatives. - *"University has directorate of QA and they monitor BL….. this is part of QA put in place by the university to monitor BL" (Nigeria, Male)*.
	• LECTURERS IN 5 OUT OF THE 6 PARTNER UNIVERSITIES IN GHANA SAID THEY HAVE DEVELOPED QUALITY ASSURANCE IMPROVEMENT ACTION PLANS. E.G. *"TO ENSURE QUALITY ASSURANCE, WE HAVE INTRODUCED AN ONLINE TEACHING ALLOWANCE WHICH IS TIED TO THE USE OF MOODLE FOR TEACHING"*. (FEMALE, KsTU). *"OUR INTERNAL QA IS VERY ROBUST AND THERE ARE ALWAYS UPDATES. THEY HAVE TO APPROVE THE NEWLY REDESIGNED COURSES FOR BL BEFORE WE CAN UPLOAD THEM TO THE KNUST VIRTUAL CLASSROOM"*. (FEMALE, KNUST)
	• 7 OUT OF THE 10 LECTURERS FROM NON-PARTNER UNIVERSITIES IN GHANA EMPHASISED INTERNAL QA BY THEIR UNIVERSITIES. E.G.
		• DFAT Proposal
		• DFAT Milestone report 21-22
		• DFAT Milestone report 22-23
		
		• PSC Interviews
		
		• PSC Interviews
		
		• LECTURER INTERVIEWS GHANA

[with disaggregation by university and country] (12); 3: Higher Education regulatory partners will review policies on blended learning and will be supported to develop/refine policies to take into account PEBL WA learnings]	*"LECTURERS MUST REGISTER THEIR PRESENCE ONLINE BY DELIVERING LECTURES, UPLOADING NOTES, AND MEETING OTHER REQUIREMENTS".* (MALE, UCC). *"THE CORE OF THE QA TRAINING WE HAD AT BABCOCK, ESPECIALLY FOR THE CENTRE FOR OPEN DISTANCE AND e-LEARNING IS FROM COMMONWEALTH OF LEARNING. THERE WAS A TRAINING ON AUTHENTIC ASSESSMENT. SO EVEN THAT LED TO PUBLISHING A PAPER. AND ALSO, WE HAD A TRAINING ON INSTRUCTIONAL DESIGN. YOUR COURSE MATERIALS SHOULD GO THROUGH INSTRUCTIONAL DESIGN LEVEL, CHECKING IF IT FOLLOWS THE BLENDED MODULE TEMPLATE".* (MALE, BABCOCK-U) • 6 OUT OF 12 PARTNER LECTURERS IN GHANA HOWEVER INDICATED THEIR REPURPOSED COURSES ARE YET TO BE APPROVED BY THE QUALITY ASSURANCE UNITS OF THEIR UNIVERSITIES; WHILE 5 OUT OF 10 PARTNER LECTURERS IN GHANA INDICATED SAME; THUS, HIGHLIGHTING THE ESSENTIAL ROLE OF QUALITY ASSURANCE IN BL. E.G. *"THE QA UNIT HAVE TO APPROVE ALL REPURPOSED COURSES FOR BL WHICH IS QUITE SLOW".* (MALE, UENR) *"OUR QA UNIT NEEDS TO APPROVE COURSES WE HAVE REPURPOSED FOR BL".* (MALE, BABCOCK-U)	• LECTURER INTERVIEWS GHANA • LECTURER INTERVIEWS GHANA
• How and how much did they contribute to the outcome?	• PSC respondents mentioned the QA training helped developed standard and quality e.g: *"Benchmarks were provided, there was strong emphasis on quality of participation" (Nigeria, Male)* • 11 OUT OF 12 LECTURERS FROM PARTNER UNIVERSITIES IN GHANA CITED PARTICIPATING IN QA TRAINING AND THUS CONTRIBUTING TO DEVELOPING INTERNAL QA STANDARD AND QUALITY. *"ADDITIONALLY, WE HAVE APPRAISAL SYSTEMS IN PLACE, SUCH AS QUIZZES AND ASSIGNMENTS ON THE MOODLE LMS".* (MALE, UHAS). *"OUR NEW QA POLICY HAS BEEN APPROVED BY THE ACADEMIC BOARD, WHICH IS THE HIGHEST DECISION-MAKING BODY OF THE UNIVERSITY".* (FEMALE, KsTU) • 7 OUT OF 12 LECTURERS IN PARTNER UNIVERSITIES IN GHANA UNDERSCORED THEIR UNIVERSITIES HAD EXISTING QA ARRANGEMENTS IN PLACE PRIOR TO PEBL PROGRAMME BUT ONLY UPDATED THEM. *"AND ALSO, THE UNIVERSITY'S OWN QUALITY ASSURANCE SYSTEMS, e-PEDAGOGY POLICY IS EMPHASISED FOR BL, THAT'S BOTH ONLINE AND IN-PERSON".* (FEMALE, KsTU)	• PSC Interviews • LECTURER INTERVIEWS GHANA • LECTURER INTERVIEWS GHANA
• What were the challenges?	• *"Applying the QA tool and QA rubric was extensive and time-consuming… many of the partner universities [were] not able to complete all of the required activities…. The ACU allocated additional financial resources* [so universities could pay staff to do this]. • Only 1 PSC respondent mentioned the challenge of the QA training while responding to the quality of training eg: *"Very good but challenge was it was online. There is distraction with online training"(Nigeria, Male)* • 9 OUT 12 LECTURERS FROM PARTNER UNIVERSITIES IN GHANA CITED THE INABILITY OF CONDUCT END OF SEMESTER EXAMINATIONS ON THE LMS AS A REGULATORY LIMITATION. *"WE ARE UNABLE TO CONDUCT END-OF-SEMESTER EXAMINATIONS ONLINE AS OUR REGULATORS HAVE NOT APPROVED IT YET".* (FEMALE, KsTU) • ONE LECTURER FROM A PARTNER UNIVERSITY IN GHANA SAID THAT QA PROCESSES EMERGED AS A BOTTLENECK, WITH THE MAJORITY OF LECTURERS STILL WORKING TOWARDS FINALISING BLENDED COURSES FOR OFFICIAL ROLLOUT AND STUDENT ENROLMENT. E.G. *"THE QA PROCESS IN MY UNIVERSITY IS THOROUGH. I HAVE TWO COURSES PENDING APPROVAL".* (FEMALE, ASHESI-U)	• DFAT Milestone report 22-23 • PSC Interviews • LECTURER INTERVIEWS GHANA • LECTURER INTERVIEWS GHANA
• Will this be sustained after the end of the programme?	• 3 out of 6 Nigerian PSC respondents emphasized they had existing QA structures in place before PEBL WA e.g: ○ *"The QA unit also looks at usage of LMS……. QA unit looks at what lecturers are doing using LMS…….. BL policy has guideline for QA" (Nigeria, Male)* ○ *"We have existing QA guidelines through the Directorate of QA, but we just expanded knowledge in that area through PEBL."(Nigeria, Male)*	• PSC Interviews
5. High-quality, credit-bearing BL courses included within traditional programmes Were the expected activities delivered: • Design one batch of modules • Deliver one batch of	• The plan envisaged 12 courses. • 12 courses assessed and selected for development by SEDA, developed and QA assessed by CoL in Yr1. • All 12 were developed and launched on OER Africa by September 2022, but only for their own use. *"It is unlikely that universities will be able to get formal approval to teach each other's courses and offer credits for it.* • 12 modules selected and developed. Existing face-to-face courses were redesigned into blended courses. 12 modules are live on OER Africa. • All 10 PSC respondents emphasized their institutions have adopted blended learning model eg: ○ *"BL is now being recognised as a mode of teaching and learning in this university. BL policy. " (Ghana, Male)* ○ *"Good number of departments have developed their courses as BL" (Nigeria, Male)*	• DFAT Proposal • DFAT Milestone report 21-22 • DFAT Milestone report 22-23 • PEBL Narrative report 21-22 • PSC Interviews

| modules [Log frame indicators: 1: Number of Higher Education Institution departments adopting blended learning model [with disaggregation by country and university]; 2 Number of quality-assured, credit-bearing courses offered through blended learning [with disaggregation by university and country] (12); 3: Number of students taking quality-assured, credit-bearing blended learning courses [with disaggregation by gender, institution and country]] | ○ *"We expect that 2/3 of our course will go on BL" (Nigeria, Male)* ○ *"We will be able to offer more courses through BL"(Ghana, Female)* ALL 12 LECTURERS FROM THE PARTNER UNIVERSITIES IN GHANA AFFIRMED THEIR INSTITUTIONS HAVE ADOPTED BL WITH 4 UNIVERSITIES APPROVING REPURPOSED COURSE MODULES. *"THE BENEFITS OF BLENDED LEARNING ARE EVIDENT, AND IT ALLOWS FOR COST AND TIME SAVINGS. CONTINUING WITH BLENDED LEARNING IS ESSENTIAL FOR US TO ACHIEVE OUR GOAL OF BECOMING A WORLD-CLASS INSTITUTION".* (FEMALE, KSTU). *"ONE OF MY COURSES WAS APPROVED WHEN THE SCHOOL RESUMED. SO, I WILL BE TEACHING IT USING BL THIS SEMESTER".* (MALE, UENR) 8 OUT OF THE 12 LECTURERS FROM PARTNER UNIVERSITIES IN GHANA HAVE COMPLETED REPURPOSING SOME OF THEIR COURSES FOR BL. *"I HAVE BEEN ABLE TO REPURPOSE MY MATERIALS FOR BOTH ONLINE AND BLENDED LEARNING SETTINGS".* (FEMALE, KNUST) 8 OF THE LECTURERS FROM PARTNER UNIVERSITIES IN GHANA REVEALED APPROXIMATELY 1,500 STUDENTS ARE ENROLLED IN CREDIT-BEARING BL COURSES THAT HAVE GONE THROUGH THE QA PROCESS. *"I WOULD SAY 2000 STUDENTS AS I TEACH SEVEN COURSES PER SEMESTER".* (MALE, KNUST). 15 of the 17 (88%) students who responded to the student survey had attended blended learning courses with no significant difference by gender or country. They had come from 12 different departments. All of them felt the courses had met their learning needs. 15 out of 17 student responses to the student survey (88%) Had attended blended learning sessions with very little variation by gender or country. Most (86%) scored the quality and usefulness of the course was excellent, with no difference by country or gender. The most frequent advantages of blended learning mentioned by students included: ○ that the interactive approach encouraged active participation (6) eg: "Blended learning combines face-to-face and online elements for flexible, personalized education, fostering engagement, accessibility, and adaptability, preparing learners for the digital age." (Ghana, female) ○ that it is accessible from anywhere (6) eg: "I learnt at the comfort of my zone". (Nigeria, Female) ○ that it is flexible (5) eg: "Students were able to attend lectures at very convenient times and also the training given to us on how to use the internet and virtual classrooms helped us a lot." (Ghana, Male) ○ that shy people could engage easily (2) eg: "It encouraged people who have public anxiety to express their concerns and ideas better". (Ghana, Female), ○ *and* that it was well planned and organised (2) eg: "The best part of it was the planning and organisation. It was my first experience, and I was so excited to participate in a blended learning session." (Nigeria, Female) All felt the course had met their needs. 9 (60%) extremely well, and 6 (40%) reasonably well. More men (56%) felt it had met them extremely well than women (44%), and more felt it had met their needs extremely well in Ghana (56%) than in Nigeria (44%). MAJORITY OF THE STUDENTS INTERVIEWED IN NIGERIA RATED IT BETTER OVER THE TRADITIONAL FACE-TO-FACE: ○ 63% (5 OF THE 8 STUDENTS INTERVIEWED IN NIGERIA) RATED IT BETTER THAN THE TRADITIONAL APPROACH UNDERSCORING THE WORD "FLEXIBILITY" E.G. *"FLEXIBILITY AND THE AVAILABILITY OF LECTURE TAKEN IN THE PAST FOR STUDENT REFERENCES UNLIKE THE TRADITIONAL CLASSES; ONCE IT HAS ENDED IT CANNOT BE REFERENCED EXCEPT THE JOTTINGS (STUDENT, LAUTECH, FEMALE)"* ○ IT ENCOURAGES SELF-PACED LEARNING AND ACCESS TO DIVERSE RESOURCES E.G. *"BLENDED LEARNING APPROACH OFFERS THE FLEXIBILITY OF SELF-PACED LEARNING AND ACCESS TO A WIDE RANGE OF RESOURCES (STUDENT, UNILAG, FEMALE)."* SOME STUDENTS FROM PARTNER UNIVERSITIES IN GHANA FEEL MOVING SOME COURSES FOR IN-PERSON TUITION WAS COUNTERPRODUCTIVE. *"WE'VE ALL GONE BACK TO THE TRADITIONAL ONE-ON-ONE, LIKE FACE-TO-FACE CLASS SESSIONS. I FEEL LIKE, EVEN THOUGH, COVID-19 IS NOT THAT SERIOUS NOW, THE BLENDED OR ONLINE LEARNING MODULE SHOULD STILL CONTINUE AS IT'S VERY CONVENIENT FOR A LOT OF US. MAYBE SOME OF US CAN MAKE IT IN THE PAST, DO IT WHEREVER WE ARE, STILL, AND THAT'S FINE. THE VIRTUAL CLASS GIVES US THE OPPORTUNITY TO GO BACK AND WATCH THE RECORDED VIDEOS OF THE LECTURES. EVERY STUDENT HAS A SMARTPHONE SO EVEN IF THEY DO NOT COME TO SCHOOL, THEY WILL KNOW HOW TO MANAGE OR USE THESE ONLINE PLATFORMS. SO, WE WANT THE CONTENTS TO BE MOBILE FRIENDLY IN TERMS OF THE DELIVERY".* (MALE, KNUST). | LECTURER INTERVIEWS GHANA LECTURER INTERVIEWS GHANA LECTURER INTERVIEWS GHANA Student survey Student survey Student survey Student survey STUDENT INTERVIEWS IN NIGERIA STUDENT INTERVIEWS IN GHANA |
| What were the challenges? | While in East Africa if changes to courses are not more than 30% they do not need re-accreditation, in West Africa all changes require courses to be re-accredited which is not possible in the programme time-line. | DFAT Milestone report 22-23 |

	• The most frequently mentioned suggestions by the 17 students who responded to the student survey about what more universities could do to improve the quality and effectiveness of blended learning were:
	  ○ Improve network access and pay for data (5) eg: *"I think a certain amount of data for students monthly which the payment will be paid together with tuition." (Nigeria, female)*
	  ○ Make platforms more user friendly and provide more training (2) eg: *"[The] university should invest in user-friendly platforms and provide robust training for both educators and students. (Ghana, Female)*
	• Provide stable and reliable power (2) eg *"[The university should "provide us with efficient power supply [because] many students have no electricity." (Ghana, Female)*
		• Student survey

• Will this be sustained after the end of the programme?	• 7 OF THE 8 STUDENTS FROM PARTNER UNIVERSITIES IN GHANA HYPED THE MERITS OF BL AND ADVOCATED FOR ITS SUSTAINABILITY. E.G. *"FOR ME PERSONALLY, I LIKE THE FACT THAT I'M ABLE TO GO BACK AND WATCH THE LESSONS AND LECTURES, SO I CAN KEEP ON GOING BACK TO RESEARCH, WHATEVER I DO, I'M ABLE TO GET IT FAST. SO, THE PROVISION OF THE LIGHTING, I DON'T NECESSARILY HAVE TO WALK TO THE BUILDING OF THE ACTUAL LIGHTING AND WHAT WE HAVE TO DO. WE HAVE A MESSAGE BOOK AS A DASHBOARD, A SPECIFIC BOOK TO LOOK OUT FOR, FOR ATTENDING A CERTAIN LESSON. SO, WE CAN EASILY ACCESS THE VIRTUAL CLASS AND LESSONS. SO, THE AVAILABILITY OF THE TECHNOLOGICAL PLATFORMS ENABLED ME TO LEARN ANYWHERE ON MY SMARTPHONE OR COMPUTER. IN FACT, IT'S VERY EASY. I DON'T HAVE TO CARRY BOOKS ALONG AS I MENTIONED EARLIER. AND IT HAS INCREASED MY ENGAGEMENT WITH MY LECTURERS ON OUR VIRTUAL PLATFORM, SINCE WE CAN ASK QUESTIONS DIRECTLY, FROM EVEN COLLEAGUE STUDENTS AND LECTURERS DO ASSIST US BY ANSWERING THEM. AND THE ENGAGEMENT AND THE LEARNING OUTCOME IS ROBUST. IN FACT, I CAN SAY MY PERFORMANCE HAS INCREASED"*. (FEMALE, KNUST)	• STUDENT INTERVIEWS GHANA

EQ3. Did the Theory of Change work and were the assumptions correct?

Assumption	Evidence to support the alternative approach	Source
• The approach and expected results will be affected by the country context.	• NOUN Staff noted that some participants from about three HEIs dropped from the training programme due to limited resources and lack of awareness of it objectives. *"Negatively: Poor Awareness (Project Technical Lead, male)"* • Senior NOUN and GTEC informants described how Local infrastructure limitations and institutional contexts influenced delivery - *Geopolitical zones are important in Nigeria, it would have been better if ACU selected per zone and the selected will be able to scale up in their region. (NOUN, Nigeria, Female).*	• Implementation Partners interviews • Implementation Partners interviews

• Teaching staff are willing and incentivised to adopt blended learning.	• All 10 PSC respondents acknowledged provision of funding by ACU, however, 3 out of 4 Ghanaian universities mentioned use of promotion as incentive e.g:
	  ○ Provision of funding by ACU: *"ACU supported training by helping us support our staff by providing cost of data". (Nigeria, Male)*
	  ○ 1 PSC respondent acknowledged giving leadership role as incentive eg: *"We gave Leadership roles to those who participated and that motivated a lot of people" (Nigeria, Nigeria)*
	  ○ Promotion as incentive: '*Lecturers say they don't have time, so we use as research incentive and count toward promotion as incentive' (Ghana, Female).*
	  ○ *"We had to work this out as an incentive to promotion" (Ghana, Male)*
	  ○ Institutional funding: *"We had instances where people are not only paid for attending workshop but also paid to repurpose their courses. That made them work very fast" (Ghana, Male)*
	• ALL PARTNER UNIVERSITIES HAVE TRANSITIONED TO MANDATORY BL WITH 5 OUT OF THE 6 PARTNER UNIVERSITIES USING THE MOODLE LMS. E.G. *"WE ARE REQUIRED TO UPLOAD LECTURES AND DELIVER COURSES ON MOODLE, AND STUDENTS MUST ATTEND ONLINE CLASSES"*. (MALE, UENR). *"MANAGEMENT HAVE PROVIDED ALLOWANCE AND DATA PACKAGE TO LECTURERS WHO SWITCH TO BL USING THE MOODLE FOR TEACHING"*. (FEMALE, KSTU)
	• ALL PARTICIPANTS FROM BOTH PARTNER AND NON-PARTNER UNIVERSITIES WERE HAPPY THE APPRAISAL SYSTEMS LIKE QUIZZES AND ASSIGNMENTS; AND ABILITY TO INTEGRATE OTHER TOOLS (SUCH AS NEARPOD) TO MOODLE ALLOWING MONITORING OF TEACHING QUALITY. E.G. *"I'M CURRENTLY VALIDATING A QUIZ I POSTED TO ONE OF MY COURSES ON THE LMS"*. (MALE, BABCOCK-U). *"THE MOODLE APPRAISAL FEATURES MAKE IT EASIER TO ASSESS UNDERSTANDING OF MY STUDENTS"*. (MALE, ANU)
		• PSC Interviews
		
		• LECTURER INTERVIEWS GHANA
		
		• LECTURER INTERVIEWS GHANA

• Students are able to	• All 10 PSC respondents acknowledged students access and use the BL materials eg:	• PSC Interviews

access and use online learning materials.	o *"Developing BL to be offered by 100 level students with zero credit courses but mandatory. It will expose students to BL and the LMS". (Nigeria, Male)* o *"Students now embrace BL, before now they use whatsapp and zoom but through PEBL, we are now using LMS." (Nigeria, Male)* o *"Many are engaging students now. PEBL got us to use LMS and BL quicker". (Ghana, Female)* o *"Some students who left the university have been able to complete their programme through the LMS and BL and also ensuring standard using the QA just like in the face to face"(Ghana, Female)* • LECTURERS IN GHANA INDICATE THAT MOST STUDENTS ARE EAGER TO ENROL FOR BL COURSES. E.G. *"BL MAKES MY WORK MORE FLEXIBLE. IT REDUCES MY COMMUTE TIME AND FUEL COST TO DRIVE TO CAMPUS TEACH, LIKEWISE STUDENTS". (FEMALE, UENR).* • 15 out of 17 student responses to the student survey (88%) Had attended blended learning sessions with very little variation by gender or country. Most (86%) scored the quality and usefulness of the course was excellent, with no difference by country or gender. All felt the course had met their needs. 9 (60%) extremely well, and 6 (40%) reasonably well. More men (56%) felt it had met them extremely well than women (44%), and more felt it had met their needs extremely well in Ghana (56%) than in Nigeria (44%). • ALL STUDENTS INTERVIEWED IN NIGERIA (100%) REPORTED THAT THEY HAVE ACCESS TO THE ONLINE MATERIALS, RATING THE QUALITY OF THE TRAINING HIGH (GOOD) E.G. *"IT WAS VERY EASY TO NAVIGATE BUT CONNECTIVITY ISSUE IS A MAJOR ISSUE." (STUDENT, FIRST TECHNICAL UNIVERSITY, MALE)"* • THIS WAS MADE EASY THROUGH THE TRAINING RECEIVED E.G. *"I RECEIVED GUIDANCE PRIMARILY ON NAVIGATING THE LEARNING MANAGEMENT SYSTEM PLATFORM." (STUDENT - FEMALE - FUNAI)"* • DUE TO THE ACCESS GAINED TO THE ONLINE MATERIAL, THEY ALL RATE THEIR DIGITAL LITERACY SKILLS HIGH (GOOD) E.G. *"GOOD, BECAUSE I AM PROFICIENT IN PYTHON, MICROSOFT EXCEL AND WORD AND I HAVE TAKEN COURSES ON COURSERA (STUDENT, LAUTECH, MALE)"* • ALL 8 STUDENTS FROM UNIVERSITIES IN GHANA THINK IF INTERNET IS STABLE, IT WAS EASIER TO ACCESS COURSES AND BL MATERIALS. E.G. *"THIS BL APPROACH PROVIDED SWIFT WAYS OF LEARNING. NOW I USE ALL MY BOOKS ONLINE I HARDLY WRITE IN PHYSICAL BOOKS. I USE MY PC AND HAVE ALL MY BOOKS, VIDEOS WELL ORGANISED ONLINE. IT IS FAR BETTER THAN OLD METHODS OF LEARNING WHERE YOU HAD TO CARRY MANY NOTEBOOKS AND TEXTBOOKS, ALONG WITH LOADS OF LECTURE NOTES. THIS METHOD IS MORE HELPFUL".* (MALE, KNUST).	• LECTURER INTERVIEWS GHANA • Student survey • STUDENT INTERVIEWS IN NIGERIA • STUDENT INTERVIEWS IN NIGERIA • STUDENT INTERVIEWS IN NIGERIA • STUDENT INTERVIEWS IN GHANA
• Partner university management willing to adopt and replicate PEBL initiatives and have the resources.	• NOUN Staff mentioned that positive motivation from the implementing partner's performance indicates willingness and support from partner university management. *"The performance of the implementing partner during the COVID-19 pandemic became a source of motivation for the participants to come out with a good result."* and *"Senior management and programme manage response where helpful to resolve issues concerning certain participants who were not performing to expectations (Project Administrator - Administrative)"* • Both senior NOUN and GTEC informants stated that some partners fully committed, but others faced limitations in resources and coordination. • All 10 PSC respondents acknowledged the institutional support in their universities with no country variation eg: o *"Senate approved BL policy and will go a long way in the development of the university" (Nigeria, Male)* o *"We will continue, we have in our budget support for BL even when donors move out and no financial support anymore. We have intentional support from the university" (Ghana, Male).* • INTERVIEWS WITH LECTURERS FROM PARTNER AND NON-PARTNER UNIVERSITIES IN NIGERIA HAS IDENTIFIED A RANGE OF INITIATIVES AND RESOURCES THAT UNIVERSITY MANAGEMENTS HAVE PUT IN PLACE TO ADOPT AND REPLICATE PEBL INITIATIVES. IT INDICATES A STRONG INCLINATION TOWARDS THE ADOPTION AND REPLICATION OF PEBL INITIATIVES IN THE NIGERIAN HIGHER EDUCATION SYSTEM: • SOME OF THE INSTITUTIONS HAVE ESTABLISHED POLICIES TO ADOPT AND ENCOURAGE THE SUSTAINABILITY OF BLENDED LEARNING: o 60% (3 OF 5) OF THE LECTURERS FROM THE NON-PARTNER INSTITUTIONS IN NIGERIA REPORTED THE ADOPTION OF E-LEARNING POLICY OR DIGITALISATION IN THEIR INSTITUTION E.G. *"WE ARE CURRENTLY DEVELOPING ELEARNING POLICY FOR THE INSTITUTION E.G. "WE ARE CURRENTLY DEVELOPING ELEARNING POLICY FOR THE INSTITUTION (NON-PARTNER LECTURER, MALE, UNIV. OF JOS)"* o RESPONSES FROM LECTURERS IN THE PARTNER INSTITUTIONS IN NIGERIA, SHOWED THAT SOME HAVE EITHER ADOPTED BLENDED LEARNING AS A GENERAL APPROACH, OR SETUP COMMITTEES FOR BLENDED LEARNING 27% (3 OF 11) LECTURERS FROM PARTNER UNIVERSITIES IN NIGERIA REPORTED THAT THEIR INSTITUTION HAVE A POLICY THAT BACKUP E-LEARNING IN PLACE E.G. *"THE UNIVERSITY HAS ESTABLISHED*	• Implementation Partners interviews • Implementation Partners interviews • PSC Interviews • LECTURER INTERVIEWS NIGERIA • LECTURER INTERVIEWS NIGERIA

	Policy on e-learning (Partner Lecturer, Female, Univ. of Ibadan)" ○ _Some partner and non-partner universities in Nigeria indicated that some had also upgraded their facilities for blended learning e.g. "Before the PEBL-WA, the awareness about blended learning was little, but now, most lecturer have now adopted the approach and management of the institution have now updated facilities and installed interactive boards, now lecturers now record their lectures for students to listen after class (Partner Lecturer, Male, First Technical University)"_ • _And some indicated that university management emphasizing the embrace of blended learning e.g "The university management are now emphasising the embrace of BL (Non-Partner Lecturer, Female, UNIZIK)"_ • _5 partner universities in Ghana have taken steps to make BL work in their institutions. E.g. "The benefits of blended learning are evident, and it allows for cost and time savings. Continuing with blended learning is essential for us to achieve our goal of becoming a world-class institution". (Female, KsTU) "KNUST has a strong commitment to promoting e-learning, and it is part of the university's agenda. The Quality Assurance Unit has already mandated lecturers to incorporate BL elements into their courses". (Male, KNUST)_	• Lecturer interviews Nigeria • Lecturer interviews Ghana
• Regulatory bodies will support blending learning.	• It was difficult to engage with the National Commissions. GTEC joined as an implementing partner in late 2022 to undertake a study of blended learning policy in Ghana, which has led to the development of proposed policies. But despite pursuing many different channels it has not been possible to engage with the Nigeria University Commission. • ACU SEDA and COL mentioned the lack of engagement of the regulatory bodies as a major failure of the programme – _"Key failure was the lack of engagement with the regulatory bodies. Tried all sorts of things in Nigeria. Had good meetings but no interest in follow-up "_ (ACU). _"CoL provided contacts and encouraged the regulatory bodies to come on board, but they were not fully onboard."_ (CoL) • Based on the interview with NOUN ED this has happened to a limited extent. Ghana's National Accreditation Board was supportive, but NUC not directly involved in Nigeria. More work needs to be done with the regulatory bodies - _"GTEC need to put in place all measures to ensure quality"_ (GTEC, Ghana). _"NUC has to be carried along to ensure this transformation"_ (NOUN, Nigeria, Female) • _4 out of 12 lecturers from partner universities in Ghana revealed, beyond internal QA, GTEC had to approve some courses that universities had repurposed for BL delivery. "KNUST's quality assurance units regularly assess courses, gather student evaluations, and report to GTEC which is a common practice". (Female, KNUST)_	• DFAT Narrative report 22-23 • Implementation Partners interviews • Implementation Partners interviews • Lecturer interviews Ghana

EQ4. What lessons can be derived from the evaluation to inform to future programming?

Sub-question	Evidence to support the alternative approach	Source
• What lessons can be derived from the evaluation to inform to future programming?	• ACU SEDA and COL identified several lessons for future programming: ○ The need to select the right universities to work with – _"Selection of partner universities. Need to understand why they want to join. Some joined but didn't really have time. Looked at it as the start of a short-term programme rather than a longer-term process"_ (ACU) ○ Having enough time – _"The short duration of the programme in West Africa undermined the "phased" approach to expert training and subsequent cascade training that had been developed in East Africa"_ (SEDA). ○ Engaging early with the regulatory bodies – _"Need to get regulatory bodies on board. Maybe create an award for best blended learning practice to show that it works"_ (CoL) ○ Ensuring good internet access _"[This was] outside the scope of the programme but is a major constraint. Most training happened remotely. Many trainees had to pay their own data costs. Need to address this. (ACU)_ ○ Need more research and evidence it works to attract interest – _"More research but need more than just reports. Need to share the results of research and evaluations. Maybe partners in Ghana and Nigeria could run webinars for staff in universities in other countries to share the results, processes and approaches. Also web site or blog for the communications. But awareness raising is not enough also need technical support."_ (CoL) • NOUN staff felt that clear communication through forum for an initial meeting to create awareness of programme expectations,	• Implementation Partners interviews • Implementation

especially within a defined timeline, are crucial for successful implementation. "*Emphasis on forum for an initial meeting with participants for briefing about the programme objectives and the participating elements to ensure that expectations are met (Project Administrator – Administrative, female)*".
 	
• NOUN staff felt that early involvement of implementing partners in the planning process is recommended to anticipate and address potential challenges. "*Involving the implementing partners in the planning process. This will help the implementing partners to figure out what works ahead of time (Project Technical Lead, male)*"
 	
• NOUN staff felt that the programme needs to be of sufficient duration and be aligned with academic calendars - "*Duration of the programme could have taken cognizance of individual activity like getting their Academic Calendar and work by it (Project Coordinator – Academic)*"
 	
• NOUN staff felt that long term institutional support as factors is essential to ensure sustainability of the outcome. "*Workshop can be organized to foster the use of BL. Also with backup from the institution management and required technologies in place, sustainability is inevitable (Project Technical Lead, male)*"
 	
• Key lessons from the interview with the NOUN ED were that:
  o Ongoing regulatory involvement important for support
  o Management support ensured success in the institutions - "*Leadership is important in management of programme". (NOUN, Nigeria, Female).*
  o A working LMS is essential for programmes like this to succeed - "*Some institutions did not have learning management system during the programme but had it before the programme ended."(NOUN, Nigeria, Female)*
 	
• GTEC also identified that the inadequacy of infrastructure and standard policy to BL limits the quality in Ghana. '*We need to invest strategically…. institutions to have BL equipment and investment"(GTEC, GhanaV)*
 	
• Key lessons from the interviews with the PSC members were that:
  o Involvement of university leadership and management is crucial for driving institutional change eg: "*We have intentional support from the university" (Ghana, Male).*
  o Adequate infrastructure and internet connectivity pose major bottlenecks eg: "*Challenges- access to data. internet optic fibre, access to internet, obsolete systems" (Nigeria, Male)*
  o INCENTIVES help motivate participation eg: "*Lecturers say they don't have time, so we use as research incentive and count toward promotion as incentive" (Ghana, Female)*
  o CASCADING training in-country builds local capacity eg: "*People have been trained and certified. Confidence to engage blended learning has been reinforced" (Nigeria, Female). "we have the capacity, we need to constantly train facilitators in KsTU" (Ghana, Male)*
  o Closer collaboration with regulators and government is needed for sustainability eg: *Regulators were brought on board which is good…. ACU working with regulators will ensure sustainability" (Ghana, Male)*
  o Managing change requires sensitivity and gradual introduction "*We have to do the training gradually. Things have to be done gradually. Very few people have been trained and we have not covered 50% of the university-cos of programme mentality". (Ghana, Male)*
  o Networking within the universities helped in achieving the outcome: eg - "*Yes the networking, interaction afforded me another level of skills. Community where we learn from each other" (Ghana, Male*)
 	
• Suggestions for improving the impact of PEBL from staff who responded to the staff survey included:
  o 22 (45%) said continued practical support with training and institutional support eg – "If there can be support as a way of collaboration to train more faculty, impress on institutions to provide the needed infrastructure and human resource to enforce blended learning. (Ghana, Male)". "By providing continuous support to the university. (Nigeria, Female). Regular training and exposure to more information. (Nigeria, Male)". "Supporting the university with more online teaching aids, e-books, question banks and materials for various subjects, animation, pictures, and videos. (Ghana, Female)"
  o 16 (33%) said by providing support for infrastructure and equipment eg – "*Additional funding for internet and infrastructure upgrade. (Ghana, Female)". "[Providing a] Laptop with the installed LMC platform, unrestricted access to network for data. (Nigeria, Male)". "Technical support in terms of infrastructure for the blended learning can be a plus. Paying for subscriptions et Al can also be helpful. (Nigeria, Female). Providing stable internet connection. (Ghana, Male)". "PEBL-WA can help the*
	Partners interviews
	
	• Implementation Partners interviews
	
	• Implementation Partners interviews
	
	• Implementation Partners interviews
	
	• Implementation Partners interviews
	
	• Implementation Partners interviews
	
	• PSC Interviews
	
	• University staff survey

	Institution with the provision of A State-of-the-Art centre Multimedia Centre to facilitate the creation of instructional videos. (Ghana, Male)."	
	o 7 (14%) said funding eg – *"Provide more funding and extend the duration of the programme. (Nigeria, Male)". "Funding for technical equipment, continuous ToT and capacity building. (Ghana, Male)". "Funding for training more staff and students on course design and development, online facilitation, quality assurance and gender inclusiveness. (Nigeria, Female)"*	
	o 2 (4%) said providing more opportunities for networking eg – *"Sponsor exchange programmes on Blended Learning for further trainings among other West Africa Institutions . (Nigeria, Female)." "More engagement and workshops outside the region for more interactions. (Nigeria, Male)"*	
	• BASED ON THE INTERVIEWS WITH LECTURERS FROM PARTNER AND NON-PARTNER UNIVERSITIES IN NIGERIA, HERE IS A SUMMARY OF THE LESSONS THAT CAN BE DERIVED (POSITIVE AND NEGATIVE) FROM THE EVALUATION TO INFORM FUTURE PROGRAMMING. THE EVIDENCES SUGGEST THAT SIGNIFICANT LESSONS HAVE BEEN LEARNED AND IT REFLECTS THE DIVERSITY OF EXPERIENCES FROM THE PEBL-WA PROGRAMME AMONG THE INTERVIEWED LECTURERS:	• LECTURER INTERVIEWS NIGERIA
	• INTERVIEWS WITH LECTURERS IN BOTH PARTNER AND NON-PARTNER UNIVERSITIES IDENTIFIED GETTING ACCESS TO INTERNET, IRREGULAR POWER SUPPLY AND TECHNICAL DIFFICULTIES AS A MAJOR CHALLENGE E.G. *"INTERNET CONNECTIVITY WITHIN THE CAMPUS WAS A MAJOR ISSUE E.G. "THE BIGGEST CHALLENGES INCLUDED INTERNET AFFORDABILITY AND THE UNRELIABLE NATURE OF INTERNET NETWORKS (PARTNER UNIVERSITY, FEMALE, UI)"*	• LECTURER INTERVIEWS NIGERIA
	• FEEDBACK FROM LECTURERS IN PARTNER AND NON-PARTNER UNIVERSITIES IN GHANA ON THE TRAINING WAS OVERALL POSITIVE. E.G. *"WE WOULD ALWAYS GIVE CREDITS TO PEBL THAT WHEN THEY CAME TO OUR UNIVERSITY, THEY HAVE ACTUALLY CHANGED THE MODUS OPERANDI OF INSTRUCTION AND ALSO THE TEACHING".* (FEMALE, CATHOLIC-U)	• LECTURER INTERVIEWS GHANA

	• LECTURERS IN PARTNER AND NON-PARTNER UNIVERSITIES IN GHANA PROPOSED A NUMBER OF WAYS IN WHICH THE PROGRAMME COULD BE IMPROVED EG:
	  o DEVELOPING A NON-INTERNET BASED LMS TO ADDRESS CHALLENGES OF UNRELIABLE INTERNET ACCESS. E.G. *"AN OFFLINE LMS WOULD HELP MAKE BLENDED LEARNING MORE FEASIBLE FOR OUR KIND OF ENVIRONMENT".* (FEMALE, TTU)
	  o ADDRESSING CONNECTIVITY ISSUES, LONG-TERM SUSTAINABILITY, INCLUSION OF STUDENTS IN TRAINING PROGRAMMES, AND TECHNOLOGY ACCESS FOR ALL LEARNERS AS PRIORITY AREAS FROM THE FEEDBACK DISCUSSION. E.G. *"WE REQUIRE SIGNIFICANT INVESTMENT TO ESTABLISH CENTRES CREATING A TECHNOLOGICAL DEVICE LIBRARY, WHERE STUDENTS CAN BORROW TABLETS OR LAPTOPS, COULD BE BENEFICIAL".* (FEMALE, KSTU)
		• LECTURER INTERVIEWS GHANA

	• CASCADING THE PEBL TRAINING SHOULD BE NEED-BASED. INSTITUTIONS MUST THEIR OWN INTERNAL EFFORTS AND HAVE BASIC INFRASTRUCTURE IN PLACE TO SUPPORT BL AND MAKE IT SUSTAINABLE. E.G. *"GET AN ON-SITE TEAM TO SUPPORT. IT SHOULDN'T BE LIKE FROM ANYWHERE YOU APPEAR AND DISAPPEAR, THAT WOULDN'T MAKE IT LASTING. GET ON-SITE PEOPLE TO SUPPORT THE PROGRAMME EVEN IN YOUR ABSENCE".* (FEMALE, CATHOLIC-U)	• LECTURER INTERVIEWS GHANA

	• The most frequently mentioned suggestions by the 17 students who responded to the student survey about how blended learning could be improved were:
	  o Ensuring reliable access to the internet at sufficient speed (7) eg: *"Just to make sure the Internet is stable enough" (Nigeria female)*
	  o Providing devices (5) eg: *"Provision of gadgets to aid in the participation of this learning process". (Ghana Female)*
	  o Better scheduling – to fit personal schedules and avoid internet hot spots (2) eg: *"Scheduling times to fit when there's not an overload on the internet". (Ghana Female)*
	  o Training – in devices, software and internet access (2) eg: *"Students should be given orientation sessions at the beginning of the course to familiarize them with the online tools and expectations". (Nigeria, Male)*
		• Student survey

	• and on how the training on BL could be improved:
	  o It should be more detailed (4) eg *"To enhance blended learning material training, consider providing interactive tutorials, addressing technical challenges comprehensively, offering ongoing support". (Ghana, Female)*
	  o More students should be trained (3) eg: *"The training should be structured such that every department have their representatives who will in turn relate the training to the rest of their course mates." (Nigeria, Female)*
	  o There should be more technical training on device use and internet access eg: *"The students should be encouraged to get at least a computer system of their own, and also taught how to use them regardless of their course of study". (Nigeria, Female)*
		• Student survey

	• BASED ON THE RESPONSES OF STUDENTS INTERVIEWED IN NIGERIA, HERE IS A SUMMARY OF THE LESSONS THAT CAN BE DERIVED (POSITIVE AND NEGATIVE) FROM THE EVALUATION TO INFORM FUTURE PROGRAMMING:
	• ALL STUDENTS INTERVIEWED IN NIGERIA (100%) UNDERSCORE THE IMPORTANCE OF RELIABLE INTERNET CONNECTIVITY E.G. "*INTERNET CONNECTIVITY WITHIN THE CAMPUS WAS A MAJOR ISSUE.(STUDENT, FIRST TECHNICAL UNIVERSITY, , FEMALE)*"
	  ○ 5 OUT OF THE STUDENTS INTERVIEWED IN NIGERIA STATED UNEQUIVOCALLY THAT THERE SHOULD BE PROVISION OF INFRASTRUCTURE AND TECHNICAL FACILITIES THAT SUPPORT BLENDED LEARNING E.G. "*PROVISION OF TECHNICAL FACILITY LIKE PC, POWER SUPPLY WHEN IT IS MOST NEEDED, INTERNET SERVICE." (STUDENT, FUNAI, FEMALE)*"
	  ○ THEY ALL AGREED TO THE FACT THAT THE NEW APPROACH MADE LEARNING MORE INTERACTIVE AND ENGAGING FOR THEM E.G. "*IT MADE LEARNING AN INTERACTIVE ONE. IT MAKES COMMUNICATION ALSO EASIER." (STUDENT, UNILAG, FEMALE,)*"
	  ○ THE PARTICIPATING STUDENT'S DIGITAL LITERACY WAS IMPROVED AS A RESULT OF THE TRAINING E.G "*GOOD, BECAUSE I AM PROFICIENT IN PYTHON, MICROSOFT EXCEL AND WORD AND I HAVE TAKEN COURSES ON COURSERA (STUDENT, FIRST TECHNICAL UNIVERSITY, MALE,)*"
	• FEEDBACK ON TRAINING AMONG STUDENTS FROM GHANA WAS POSITIVE, INTERNET CONNECTIVITY, SUSTAINABILITY, INCLUSION, AND TECHNOLOGY ACCESS GAPS NEEDED TO BE ADDRESSED FOR BLENDED LEARNING SCALE-UP AND CONTINUITY. E.G. "*I BELIEVE THE WHOLE ISSUE OF INFRASTRUCTURE AND THE FACILITIES REALLY UNDERMINES THE CONCEPT OF BLENDED LEARNING BECAUSE IF THE INFRASTRUCTURE AND THESE FACILITIES AREN'T AVAILABLE THEN, THAT ASPECT OF BLENDED LEARNING IS NO MORE. IF WE CAN ENHANCE THESE FACILITIES, IMPROVE UPON THE INFRASTRUCTURE AND MAKE THEM MORE ACCESSIBLE TO ALL THE STUDENTS, IT WILL HELP IN MAKING SURE THAT THE GOAL OR TARGET THAT IS BEING SET IS ACHIEVED*". (MALE, UHAS)
	• STUDENTS FROM GHANA PROPOSED DEVELOPING AN LMS THAT DOESN'T REQUIRE INTERNET, TO ADDRESS UNRELIABLE CONNECTIVITY ISSUES AND MAKE BLENDED LEARNING MORE FEASIBLE. E.G. "*ON CAMPUS, MOST OF THE TIME WE USE THE WI-FI TO CONNECT ONLINE. SOMETIMES YOU REALISE THAT THE NETWORK GOES OFF. YOU HAVE TO HAVE A BACKUP INTERNET CONNECTION SO THAT YOU'LL BE ABLE TO CATCH UP. IF YOU ARE NOT ABLE TO GET A BACKUP INTERNET CONNECTION THEN THERE IS TROUBLE. AN OFFLINE LMS WILL BE HELPFUL*". (MALE, STU)
	• STUDENTS FROM GHANA STRONGLY SUGGESTED EXTENDING BLENDED LEARNING CAPACITY BUILDING TO REACH MORE STUDENTS. E.G. "*MY ONLY COMMENT IS THAT I WILL WANT THIS LEARNING APPROACH TO CONTINUE, MORE TRAINING FOR STUDENTS AND IF THE UNIVERSITY WILL ADOPT IT AND CONTINUE WITH IT, I WILL BE GRATEFUL*". (MALE, ANU)
		• STUDENT INTERVIEWS IN NIGERIA
		• STUDENT INTERVIEWS IN NIGERIA
		
		• STUDENT INTERVIEWS IN GHANA
		
		• STUDENT INTERVIEWS IN GHANA

• What will the challenges be?	• Senior NOUN and GTEC informants both mentioned lack of infrastructure, acceptability and positive mindset as major challenges. – "*There is lack of good perception about people who graduate from BL programs'.(GTEC, Ghana)*"
	• INTERVIEWS WITH LECTURERS IN PARTNER AND NON-PARTNER UNIVERSITIES IN NIGERIA IDENTIFIED A WIDE RANGE OF CHALLENGES FACED BY LECTURERS DURING THE PEBL-WA TRAINING PROGRAMME THESE INCLUDED:
	  ○ 75% OF THE RESPONDENTS (12 OUT OF 16) REPORTED ISSUES WITH INTERNET ACCESSIBILITY, AFFORDABILITY, AND STABILITY. OF THESE, 9 RESPONDENTS WERE FROM THE PARTNER UNIVERSITY AND 3 WERE FROM THE NON-PARTNER UNIVERSITY E.G. "*THE BIGGEST CHALLENGES INCLUDED INTERNET AFFORDABILITY AND THE UNRELIABLE NATURE OF INTERNET NETWORKS (PARTNER UNIVERSITY, FEMALE, UI)*"
	  ○ 31.25% (4 OUT OF 16) OF THE RESPONDENTS (PARTNER LECTURERS) REPORTED ISSUES WITH CONSISTENT POWER SUPPLY WITHIN AND OUTSIDE THE CAMPUS E.G. "*PERENNIAL CHALLENGE WITH POWER SUPPLY DURING THE TRAINING AND THE CASCADING PERIOD (PARTNER UNIVERSITY, FEMALE, UI)*"
	  ○ 38% (6 (1 NON-PARTNER LECTURER) OUT OF 16) OF THE RESPONDENTS REPORTED THE CHALLENGE OF LACK OF ELECTRONIC GADGETS AMONG STUDENTS AND LECTURERS. THE WORDS "GADGETS", "DEVICES" AND "TOOLS" WERE USED INTERCHANGEABLY E.G. "*ONE OF THE MAJOR CHALLENGES IS THAT MOST OF THE STUDENTS DO NOT POSSESS THE ELECTRONIC GADGET REQUIRED FOR THE BLENDED LEARNING APPROACH ESPECIALLY INTERNET ENABLED SMART PHONE AND PC. ON THE SIDE OF THE LECTURERS, SOME OF US DON'T HAVE THE REQUIRED PC SUITABLE FOR RECORDING LECTURE CONTENT" (PARTNER UNIVERSITY, MALE, EBONYI STATE UNIVERSITY)*"
	• OTHER CHALLENGES REPORTED BY INDIVIDUALS WERE:
	  ○ WORKLOAD AND MULTITASKING E.G. "*THE CHALLENGES WERE WORKLOAD AND CLASHES WITH OTHER INTERNAL PROGRAMMES. BECAUSE OF THIS PEOPLE HAVE TO MULTITASK (NON-PARTNER UNIVERSITY, MALE, UNIVERSITY OF JOS)*"
	  ○ DIFFICULTY IN SCHEDULING FACE-TO-FACE WITH ONLINE SESSION AND PROMPT RESPONSE TO STUDENTS REQUESTS E.G. "*FOR FIRST TIMERS, IT WAS HOW TO SCHEDULE THE ONLINE COMPONENT WITH THE FACE-TO-FACE COMPONENTS. THEN PROMPT RESPONSE TO STUDENT QUESTIONS WAS QUITE CHALLENGING FOR THE NEWBIES; THEY FOUND IT SOMEHOW OVERWHELMING (NON-PARTNER UNIVERSITY, MALE, UNIVERSITY OF JOS)*"
		• Implementation Partners interviews
		• LECTURER INTERVIEWS NIGERIA
		
		• LECTURER INTERVIEWS NIGERIA

o CONTENT DELIVERY AND LMS SETUP "*THERE ARE CHALLENGES IN THE AREA OF CONTENT DELIVERY DUE TO POOR INTERNET NETWORK FAILURE. IN THE AREA OF SETTING UP THE MOODLE LMS, IT WAS DIFFICULT FOR ME TO GET AROUND THE WHOLE PROCESS OF INSTALLATION AND THE TECHNICAL TERMS (NON-PARTNER UNIVERSITY, FEMALE, UNIZIK)."* o ACCEPTABILITY OF THE APPROACH BY LECTURERS AND STUDENTS DUE TO ADDITIONAL COSTS E.G. "*ACCEPTABILITY OF THE APPROACH BY LECTURER AND STUDENTS, THEY WERE COMPLAINING THAT THEY ARE NOT FAMILIAR WITH THE APPROACH AND THAT IT WAS INCURRING ADDITIONAL COST (PARTNER UNIVERSITY, FEMALE, FIRST TECH. UNIVERSITY)"*	
• 18% (2 OF THE 16 RESPONDENTS) REPORTED THAT THE INABILITY TO PRACTICE HANDS-ON BLENDED LEARNING, IT BACKUP ISSUES, AND REDUCED COMMITMENT DUE TO REGULAR OFFICE RESPONSIBILITIES WERE SOME OFF THE CHALLENGES FACED E.G. "*ONE OF THE MAJOR CHALLENGES ARE INABILITY TO PRACTICE THE HAND-ON OF THE BLENDED LEARNING, GOOD IT BACK-UP, THE REGULAR SCHEDULE OF OFFICE RESPONSIBILITIES COUPLED WITH THE TRAINING REDUCED COMMITMENT TO THE TRAINING (PARTNER UNIVERSITY, FEMALE, FIRST TECH. UNIVERSITY)"*	• LECTURER INTERVIEWS NIGERIA

• LECTURERS FROM NON-PARTNER UNIVERSITIES IN GHANA IDENTIFIED A NUMBER OF CHALLENGES:
  o RESTRUCTURING COURSE MATERIALS, ACTIVITIES AND ASSESSMENTS FOR THE BL FORMAT TAKES A LOT OF TIME WHICH THEY DON'T HAVE AS THEY HAVE HEAVY TEACHING LOADS. E.G. "*WE HAVE LARGE CLASS SIZES AND SOMETIMES HANDLE MULTIPLE CLASSES*". (MALE, UCC)
  o REDESIGNING COURSES REQUIRES PROFICIENCY WITH LEARNING MANAGEMENT SYSTEMS, ONLINE PEDAGOGICAL TOOLS, AND DIGITAL LITERACY SKILLS. SOME LECTURERS LACK DIGITAL SKILLS TRAINING. E.G. "*IT WAS DIFFICULT FOR MOST OF MY COLLEAGUES WHO WERE NOT IT INCLINED*". (FEMALE, TTU)
	• LECTURER INTERVIEWS GHANA

• MOST LECTURERS IN GHANA (10 FROM PARTNER AND 7 FROM NON-PARTNER UNIVERSITIES CITED UNRELIABLE INTERNET ACCESS AS A MAJOR DRAWBACK TO EFFECTIVE BL COURSE REDESIGN AND DELIVERY. E.G. "*THE NUMBER ONE CHALLENGE WAS NETWORK ISSUE. SOMETIMES YOU WILL BE DELIVERING A LIVE LECTURE AND SOME STUDENTS WILL KEEP ON SAYING THAT I CAN'T HEAR YOU, I CAN'T CONNECT*". (MALE, STU)	• LECTURER INTERVIEWS GHANA

• OTHER CONSTRAINTS MENTIONED BY LECTURERS FROM PARTNER AND NON-PARTNER UNIVERSITIES IN GHANA INCLUDED:
  o UNCLEAR POLICIES AROUND OPEN LICENSING OF SELF-CREATED MATERIALS AS LIMITING ADOPTION OF BL AND CONTENT SHARING. E.G. "*YOU KNOW WE DEVELOP THE LESSON OURSELVES WITH OUR RESOURCES. I DON'T KNOW HOW IP DYNAMICS PLAY OUT WHEN I UPLOAD IT ON THE LMS*". (MALE, UENR)
  o NAVIGATING QA PROCESSES FOR REVISED COURSES INTRODUCES DELAYS AND EXTRA WORK. "*OUR QA UNIT DOES A DETAILED WORK AND IT TAKES QUITE LONG TO RECEIVE FEEDBACK*". (FEMALE, ASHESI-U)
  o MOST LEARNERS DO NOT HAVE NECESSARY DIGITAL/SELF-LEARNING SKILLS TO SUCCEED IN BLENDED MODELS. E.G. "*NOT ALL MY STUDENTS HAVE SMARTPHONE. SOME EVEN SHARE SAME PHONE WITH THEIR COLLEAGUES DURING LIVE SESSIONS*". (MALE, UESD)
	• LECTURER INTERVIEWS GHANA

• NOT ALL MANAGEMENT/LECTURERS ARE INITIALLY CONVINCED OF BL BENEFITS VS TRADITIONAL LECTURING. E.G. "*YOU KNOW, WE HAVE TOP MANAGEMENT. SOMETIMES, CONVINCING THEM TO IMPLEMENT SOME OF THESE THINGS CAN BE VERY DIFFICULT ESPECIALLY IF THEY ARE NOT IN IT OR COMPUTER SCIENCE FIELDS*". (FEMALE, STU)	• LECTURER INTERVIEWS GHANA
• SOME STUDENTS FROM GHANA LACKED SUFFICIENT DIGITAL LITERACY AND SKILLS TO NAVIGATE THE ONLINE COURSE COMPONENTS. E.G. "*I'M NOT REALLY A TECHNOLOGY KIND OF PERSON, SO IT WAS A VERY FRESH AND NEW EXPERIENCE. IT TOOK SOME TIME FOR ME TO ADJUST*". (FEMALE, KNUST)	• STUDENT INTERVIEWS IN GHANA
• SOME STUDENTS FROM GHANA DID NOT HAVE THE NECESSARY INDEPENDENT STUDY HABITS AND SELF-REGULATED LEARNING ABILITIES FOR BLENDED MODELS. E.G. "*YOU KNOW, THERE ARE SEVERAL DISTRACTIONS WHEN STUDYING AT HOME OR ON YOUR OWN ESPECIALLY FROM ONLINE. ONE NEED SOME SELF-DISCIPLINE TO PAY ATTENTION*". (MALE, KNUST)	• STUDENT INTERVIEWS IN GHANA

• THE EIGHT (8) STUDENTS INTERVIEWED IN NIGERIA HAD SIMILAR CHALLENGES DURING THE TRAINING AND THE PROGRAMME IMPLEMENTATION. THE FREQUENT CHALLENGES MENTIONED BY THE STUDENTS WERE AS FOLLOWS:
  o 7 OF THE 8 (88%) STUDENTS INTERVIEWED IN NIGERIA MENTIONED CHALLENGES RELATED TO INTERNET CONNECTIVITY E.G "*INTERNET CONNECTIVITY WHICH MADE YOU LOSE VITAL INFORMATION, SOMETIMES THE SESSION MAY NOT BE RECORDED (STUDENT, UNILAG, FEMALE)"*
  o 3 OF THE 8 (38%) STUDENTS INTERVIEWED IN NIGERIA IDENTIFIED ADAPTING TO THE NEW BLENDED LEARNING (BL) SYSTEM WAS AS A CHALLENGE AT THE INITIAL STAGE E.G "*INITIALLY IT WAS DIFFICULT TO SURF THROUGH THE INTERNET; OVERTIME IT BECOMES EASIER (STUDENT, UNILAG, FEMALE)"*
	• STUDENT INTERVIEWS IN NIGERIA

• DURING AND AFTER THE TRAINING, ALL STUDENTS INTERVIEWED IN NIGERIA (100%) CITED THE LACK OF NECESSARY EQUIPMENT AND INFRASTRUCTURE, SUCH AS INTERNET-ENABLED PCS OR SMARTPHONES, AS ONE OF THE MAJOR CHALLENGES THEY FACED. AS A RESULT, THE	• STUDENT INTERVIEWS IN NIGERIA

	QUALITY OF THE PROGRAMME WAS AFFECTED. E.G. *"DUE TO TECHNOLOGY CHALLENGES I WILL RATE THE QUALITY OF THE TRAINING GOOD. THOUGH I GAINED A LOT BUT THE LECTURERS WERE NOT CONSIDERATE OF THE FACT THAT MANY STUDENTS DO NOT HAVE REQUIRED DEVICES (STUDENT, UI, MALE)"*	
• What contribution by regulatory authorities and other organisations need to be involved, what is the best process?	• NOUN ED felt that support from the regulatory authorities is essential and that regulatory agencies like NUC need to be involved early in design and implement an advocacy strategy. - *"NUC has to be carried along to ensure this transformation" (NOUN, Nigeria, Female)* • GTEC recognises that it's role is to set the bench mark and standard for BL in Ghana - *"We want to tie it to the accreditation and they will be examined based on the standard". (GTEC, Ghana)* • The Nigerian partner universities emphasized the importance of involving the regulatory body eg: *"Strengthen the relationship with regulatory authorities and association groups. The regulatory authorities weigh so much influence than individual institutions" (Nigeria, Male)* • *"GTEC responded positively when contacted because we need to carry the regulatory body along" (Ghana, Female).*	• Implementation Partners interviews • PSC Interviews • PSC Interviews

Annex 3: The evaluation approach

Introduction

The evaluation used collaborative outcomes reporting (COR)[2] to develop a performance story[3]. This is a theory-based (i.e. starts from a Theory of Change (ToC)), realist (i.e. takes account of the context) approach to assess whether the intervention achieved the intended outcomes. It is also highly participatory involving a wide range of project stakeholders to co-analyse the evidence and co-produce the final conclusions and recommendations. It is both summative – i.e. identifying the results, and utilisation-focused – i.e. identifying what worked well and should be scaled up, what didn't work well and should be avoided, and how projects like this can be implemented most effectively. And involving all stakeholders makes it much more likely that the results will be used.

The Collaborative Outcomes Reporting Approach

The key principles of Collaborative Outcomes Reporting (COR) are that:
- It is based on a Theory of Change.
- It is highly collaborative, involving project staff and other stakeholders throughout.
- It makes as much use of existing data as possible, only collecting additional data if necessary.
- It examines the assumptions underpinning the ToC and external factors which have contributed.
- It is utilisation focused.

Performance story reports describe the intervention's programme context and aims, relate to a plausible results chain, and are backed by empirical evidence. The aim is to tell the 'story' of the intervention's performance using multiple lines of evidence. The general process is shown below:
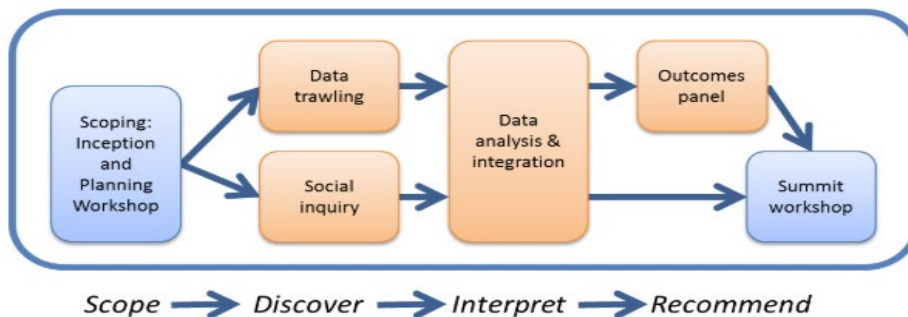
The normal process entails six main steps:

1. Scoping: in this stage the programme logic is clarified, existing data are identified, and the final set of evaluation questions developed.
2. Data trawl: analysis of existing evidence, through review of programme documentation.
3. Social inquiry: this can include any form of additional data collection that is necessary.
4. Data analysis and integration: data collected from different sources are aggregated and integrated into a "results chart" based on the programme logic and research questions.
5. Outcomes panel: these are usually workshops with project stakeholders to co-analyse the evidence compiled in step 4 and asses the project's contribution to the observed outcomes.
6. Summit workshop: this is usually a larger workshop/event that involves a wider group of stakeholders to discuss and agree on the key findings and recommendations.

The Evaluation Plan

The evaluation plan was developed in collaboration with PEBL Project Steering Committee (PSC) which consists of the leads from each of the partner universities. in a couple of sessions during the

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[2] http://www.managingforimpact.org/tool/collaborative-outcomes-reporting

[3] Dart, J., & Mayne, J. Performance Story. In S. Mathison (Ed.), Encyclopedia of Evaluation. (pp. 307-309). Sage Publications, Inc. (2005) doi: 10.4135/9781412950558.n410.

final PSC meeting in Lagos in November 2023 where participants were asked to identify the key sources of existing information, the best stakeholders to provide additional information and the most appropriate method to engage with them.

The approaches used in each of the stages were as follows:

Scoping and inception

This was done through discussions with ACU and PEBL WA partner staff as described above.

Data trawl

Documents identified by ACU staff and participants in the Lagos meeting that were reviewed for the evaluation included: PEBL WA Inception report, PEBL WA Monitoring Evaluation and Learning (MEL) Plan; Annual and milestone reports for 2021 & 2022; PEBL Value for money report; Year 1 MEL Data (Team Leaders Survey, Academics Survey, Powerpoint of survey findings); Year 2 MEL Data (Team Leaders Survey, Academics Survey, University Partners Senior Staff Survey, University Partners Student Survey, MS Word summary of survey findings; PEBL WA Quarterly reports; Report of non-partner university trainings (from ACU); Baseline data/reports about Ghana (from GTEC); and baseline data/reports about Nigeria (from ACU).

Social inquiry

The key sources of new first-hand evidence identified in the Lagos workshop were PEBL SC Members, Partner university management staff, Partner university non-teaching staff, Partner university lecturers, Partner university Students, Lecturers in non-partner institutions, Technical Partners (COL, NOUN, Seda), and Regulatory bodies (though participants felt it would be difficult to get anything from NUC because they have not engaged in project despite many efforts.

The best methods to collect it were felt to be: E-mail; Online surveys, Online or phone interviews; and Stories of change. The methods we used with each stakeholder group and the evaluation questions we hoped that would provide information for are shown below in Table 1, and the numbers we hoped to survey or interview and the number achieved are shown in Table 2.

Data analysis and integration:

The key tool used for data analysis were tables in Excell spreadsheets. The online survey was conducted using SurveyMonkey output into Excell. Answers to questions in the interviews were summarised into Excell spreadsheets. Key elements of the Stories of Change were extracted manually. The key conclusions of all of the exercises were distilled into results forms based on the overall results chart and then imported into the results chart (see pages 21-46 above).

Data validation, co-analysis and co-production, and summit workshops

The results chart formed the basis for discussions in three online workshops:

- A data validation workshop to review the emerging results chart, validate the key findings and identify any evidence gaps, and identify any "big stories" i.e. areas where PEBL has had better or worse than expected success.
- A co-analysis and co-production workshop for the core evaluation team to review the final results chart and "big stories" that emerged from the data validation workshops.
- A final online summit workshop involving representatives of all project stakeholder groups to present, discuss and validate the key conclusions and recommendations.

These were attended by c.35 participants including representatives of the implementation partners (ACU, SEDA, Col, NOUN and GTEC), university leads, other university staff who had contributed to the survey or interviews and students.

An overall evaluation timetable is provided below.

Table 1: Sources and methods of collection of first-hand evidence

Question	PSC / University Leads		Partner Lecturers	Partner Mgt & NT	Non-Partner Lecturers			Partner and Non-Partner Students		ACU&Impl. Partners
	SoC	Interview	Interview	Survey	Survey	Interview	SoC	Interview	Survey	Interview
1. What is the evidence that there is "Increased flexibility in Nigerian and Ghanaian Universities / Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality".	√	√	√	√	√	√	?	√	√	√
• How and how much did PEBL WA contribute to this.	√		√	√	√		?	√		√
• What were the other enablers?	√	√	√	√	√	√	?	√		√
• What were the challenges?	√	√				√	?	√		√
• What was the process of implementation (stories about process as well as outcome)?	√					√				
• How were the regulatory authorities involved (in implementation and outcome?)		√								√
• How sustainable will the changes be?		√	√	√	√	√				
2. What is the evidence that the expected activities and outputs were delivered?		√	√	√		√		√	√	√
• What was the process?	√									
• How and how much did they contribute to the outcome?	√									
• What were the challenges?	√	√	√	√		√			√	√
• Were the assumptions correct?										
• What additional outputs were delivered (e.g. training non-partner universities)		√	√	√		√				
3. What lessons can be derived from the evaluation to inform to future programming?		√								√
• What will the challenges be?		√								√
• What contribution by regulatory authorities and other organisations need to be involved		√								√

Table 2: Data collection planned and achieved

Stakeholder	Interview			Survey			SoC		
	Planned	Achieved	(%)	Planned	Achieved	(%)	Planned	Achieved	(%)
Implementation partners	7	7	100%						
PEBL Leads	12	12	100%				12	5	42%
Partner university lecturers/staff	24	21	88%	108	58	54%			
Partner university students	24	16	67%	60	17	28%			
Non-partner university lecturers	20	15	75%				12	5	42%
Total	87	71	82%	168	75	45%	24	10	42%

The Evaluation Timeline

Task / Week	Oct. 23		Nov. 23				Dec. 23				Jan. 24				Feb. 24				Mar. 24				Apr. 24		
	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
Bids assessed	🟧																								
Contract awarded		🟧																							
Initial discussions with PEBL staff			⬜																						
Preliminary document review			⬜																						
Preparation for Lagos meeting			⬜																						
Draft evaluation plan				🟥																					
Inception workshop in Lagos					🟦																				
Finalisation of evaluation methods					⬜																				
Inception report and detailed plan						🟥																			
1st progress review							🟩																		
Interviews with ACU team								⬜																	
Data trawl (PEBL reports & MEL data)								⬜	⬜	⬜	⬜	⬜													
New data collection (Interviews, SoC etc)										⬜	⬜	⬜	⬜	⬜	⬜	⬜									
Mid-point progress report																🟥									
2nd progress review																🟩									
1st draft Results Chart																		⬜							
Data validation workshop																			🟦						
2nd draft Results Chart																				⬜					
Co-analysis workshop																					🟦				
Final results chart & indicative findings																						⬜			
Summit workshop																								🟦	
Final report																									🟥

Key: 🟧 = PEBL WA Team task ⬜ = INASP Team task 🟩 = Progress review meetings 🟦 = Workshop 🟥 = Written deliverable

Annex 4: The terms of reference for the evaluation

Introduction and purpose of the evaluation

The [Partnership for Enhanced and Blended Learning (PEBL)](#) West Africa programme started in September 2021 with funding from the Australian Department of Foreign Affairs and Trade (DFAT) and is led by the Association of Commonwealth Universities (ACU).

PEBL WA supports the educational development capacity of academic teaching staff in Nigeria and Ghana by providing training on pedagogy, quality assurance and technological platforms. PEBL WA also enhances regional collaboration and teaching quality by enabling the exchange of knowledge and learnings between universities across the region. By participating in PEBL WA, West African universities expand the range of courses offered to students enrolled in taught undergraduate and postgraduate degree programmes.

The central purpose of the PEBL WA summative evaluation is to find out to what extent the intended outcome *"Increased flexibility in West African Higher Education systems to expand capacity to meet increasing graduate learning demands without eroding quality"* has been achieved. PEBL WA will end in February 2024, this evaluation will cover the period comprising September 2021 to January 2024. The primary recipient of the evaluation report will be the PEBL WA Partnership. Users of the evaluation findings will be ACU, PEBL WA partner universities, DFAT and other external stakeholders.

There will be four main dimensions that the evaluation will look at, these are programme effectiveness, changes to capacity building, sustainability and overall lessons learned as a result of the programme. Evidence from these dimensions will be the basis for the analysis and the findings.

Scope

The evaluation will focus on two countries-Ghana and Nigeria. The main target group in the PEBL WA programme, are partner universities (6 in Ghana and 6 in Nigeria).

Key stakeholders

The key stakeholders and sources of primary data in this evaluation are:
- PEBL WA Management team
- Partner Universities
- Technical Partners
- Higher Education Commissions (HEC)
- Students in partner universities
- IT Staff at partner universities
- Teachers, Lecturers and Course Developers in partner universities

Specific objectives of the summative evaluation

1. To assess achievement of the programme toward meeting expected results, based on Theory of Change (TOC)
2. To identify the extent to which the programme contributed to enhancing capacity of participating universities to implement and improve blended learning provision.
3. To identify the extent to which the PEBL university network established by the programme improved the overall and University specific blended learning provision.
4. To evaluate the impact/change in partner universities and how the programme has contributed to these changes (development of policies, institutionalization of capacity building activities, etc.)
5. To draw lessons that inform future programming and assess accountability status for further learning

Schedule, budget, logistics and deliverables

The evaluation process will be undertaken in line with the local context and will encourage active participation of relevant members of staff and students in the 12 partner universities which are:

Ghana:
- Kwame Nkrumah University of Science and Technology (KNUST)
- Ashesi University
- All Nations University
- Kumasi Technical University
- University of Energy and Natural Resources (UENR)
- University of Health and Allied Sciences (UHAS)

Nigeria:
- Alex Ekwueme Federal University Ndufu Alike(AE-FUNAI)
- First Technical University, Ibadan (Tech-U Ibadan)
- University of Lagos
- University of Ibadan
- Ebonyi State University
- Ladoke Akintola University of Technology (LAUTECH)

The evaluation is expected to start on November 2023 and end by February 2024. The PEBL WA programme is scheduled to organize its last network meeting in Lagos, Nigeria on November 13th and 14th, 2023. One consultant in the evaluation team will be expected to travel to Lagos to gather valuable data from participants.

The total budget available for the evaluation is £25,000 (bids exceeding this amount will not be considered). Budget for travel to Lagos will be separately arranged through the programme and will not be taken from the £25,000.

Evaluation deliverable

1. Detailed work plan, developed in consultation with ACU PEBL WA programme management staff, will be submitted for ACU approval in week 2 of the evaluation.
2. A mid-point review report that informs on progress with data collection and analysis.
3. A comprehensive final evaluation report that puts forward the evaluator's findings, recommendations and lessons learned.