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Developing Capacity for Change

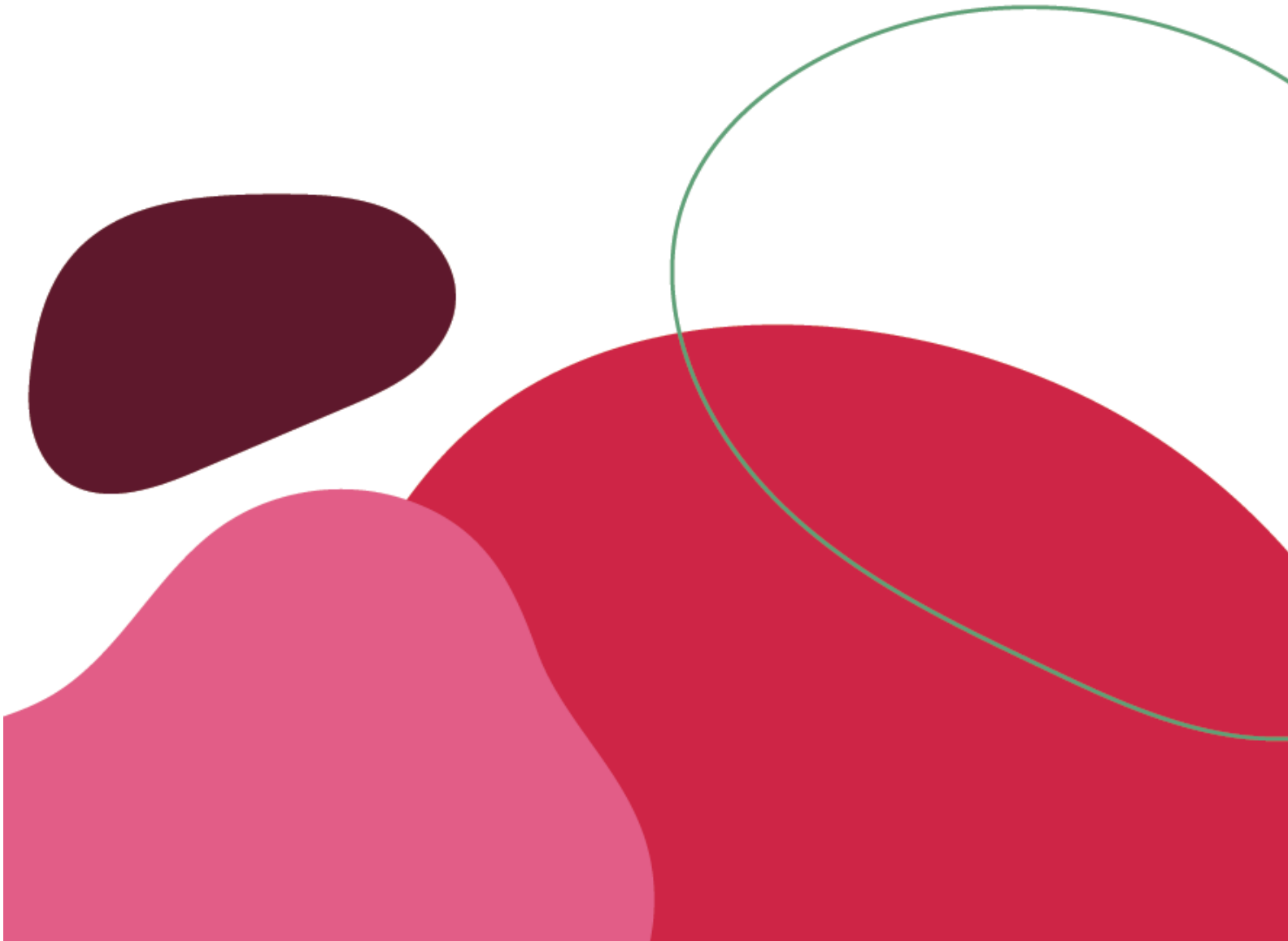
Strategic Partnerships for Higher Education Innovation and Reform (SPHEIR)

Assuring Quality in Higher Education in Sierra Leone (AQHEd-SL)

Summative Evaluation 2018-2021

Final Report

31 Oct 2021



Imprint

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Executive Summary

The project "Assuring Quality in Higher Education in Sierra Leone (AQHEd-SL)" is part of the “Strategic Partnerships for Higher Education (SPHEIR)” supported by the British Foreign, Commonwealth and Development Office (FCDO). AQHEd-SL was formally launched in April 2018 and runs through December 2021.

Paeradigms was commissioned in May 2021 to conduct a summative evaluation of the entire project. The evaluation assessed the project’s progress in achieving its core outcomes, evaluated the project’s original Theory of Change (ToC) and investigated how and why change has happened and for whom. The AQHEd-SL summative evaluation has three key characteristics: it employed a utilisation-focused approach and a participatory approach, and it proceeded on four different levels of analysis: output, outcome, impact, and lessons learned.

On the first level, AQHEd-SL **has delivered on all of its intended outputs**; it has partly exceeded the original plans, and it has flexibly adapted to changing circumstances whenever needed. Based on these outputs, AQHed-SL **has also achieved all intended outcomes**; in particular, it has resulted in

- Sustainable curriculum reform (CR) in terms of labour market needs and employability.
- Sustainable and effective structures for stakeholder engagement (SE).
- Innovation in teaching and learning methods.
- Spread of reform ideas across (and to a certain extent also within) universities.
- Sustainable and effective capacity and structures of quality assurance.
- Capacity building for project management, financial reporting, and MEL.
- Increased awareness for gender-inclusivity and diversity.

While it is too early for true impact evaluation**, AQHEd-SL has already had positive effects on all three "long-term outcomes" foreseen in the ToC:**

1. The CR/SE-processes have had effects on graduate qualifications and employability in the selected fields/programmes; SE has ensured a calibration by labour market needs.
2. The same processes along with QA, standardisation, and training has improved the overall quality of the HE sector in SL.
3. Processes like NQF-development, the upgraded role of the TEC, the endorsement of templates, the institutionalisation of QA, and the establishment of the post-graduate diploma are important first steps in systemic reform and improvement of the regulatory framework.

While the overall success of the project is truly impressive, four major limitations of AQHEd-SL stand out:

1. AQHEd-SL was very successful in instigating and implementing reform and innovation in the selected academic fields and programmes across various HEIs in SL. However, relative to SPHEIR's ambition of "transformational change", AQHEd-SL (and its ToC) payed too little systematic attention to intra-university "lateral spread", which is a key driver for systemic effects. To be sure, lateral spread has happened (at EP in spectacular fashion), but it was less systematic and less planned and structured as it might have been.
2. The necessity of accompanying political processes and communication (to ensure full HEI-leadership buy-in and support on the ministerial level) was underestimated. Especially in

light of (1), the full dedication of HEI leadership is key to achieving transformational change. To be sure, this was given at some AQHEd-SL institutions, but it was not universal. While the problem was eventually addressed not least with the formation of the High-Level Task Force (HLTF) and the collaboration with the Conference of Vice Chancellors and Principals (CVCP), it should have been a primary priority from the beginning, and it should have been fully integrated into the ToC.

3. Due to limitations of the overall approach of SPHEIR, AQHEd-SL hardly addressed the issue of research and research capacity. While the QA manual offers some guidelines on research, it was not a priority of AQHEd-SL. Research, however, is not only decisive for individual academic capacity system in HE in SL overall, it is also generally acknowledged that research has a significant potential for improving teaching quality.
4. Again, due to limitations of the overall approach of SPHEIR, AQHEd-SL hardly addressed (physical) "teaching tools" (computers, lab equipment, lab consumables, physical teaching tools, demonstration and training hardware and software). This, however, not only constitutes a rather significant obstacle in the HE system in SL in general, it also limits the application of the revised curricula and the teaching methodology.

To ensure that what has started with AQHEd-SL will not end with the project but rather spread laterally, **further political processes** will be decisive – on the level of the Ministry of Education as well as – in particular – on the level of HE leadership. It seems unlikely that an opportunity with the breadth and scope of SPHEIR will come around any time soon. However, during the evaluation, numerous "interfaces" could be identified where **new, significantly smaller projects that could be pitched to a variety of donors or connected to existing calls and funding lines** could ensure the sustainability of AQHEd-SL achievements and address the shortcomings outlined above. Most notable among those are:

- Project(s) focusing on **lateral spread of CR/SE, pedagogy, QA etc** in specific sectors (such as "health" or "agriculture") across SL.
- A project to support the development of an additional (standardised) manual on **stakeholder engagement (SE)** to create a clearing house for the different possible forms and best practices of SE.
- A project focusing on strengthening **research** (e.g. grant writing, research methodology, publication strategies etc) including the connection between research and teaching.
- Project(s) focusing on **physical teaching tools and equipment** (computers hardware, software, lab equipment, lab consumables, and physical teaching objects) based on the "light house principle" or the Cluster approach of AQHEd-SL.
- A project to continue funding for a **series of focused workshops/trainings** (on QA, on the NQF, on CR, on train-the-trainer pedagogy, etc) – not least to maintain the AQHEd-SL "community spirit".
- A project to support the **merger of HE NQF and TVET NQF** and its further development and usage for national and international student mobility.
- A project to support the maintenance and sustainability of the **post graduate degree in QA**.
- A project to support the (SL or at least West African) **localisation of textbooks and teaching materials**.
- Project(s) to support **gender, diversity, and inclusion** across HE and the "professional life-cycle" of individuals in different fields (following the AQHEd-SL Clusters).

Abbreviations

ACF	Action Against Hunger
AfriQAN	African Quality Assurance Network
AQHEd-SL	Assuring Quality in Higher Education in Sierra Leone
ASSL	Audit Service SL
B Pharm	Bachelor of Pharmacy
BA	Bachelor of Arts
BEENG	BSc in Electrical & Electronic Engineering
BSc	Bachelor of Science
CDC	Center for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
CHrs	Credit hours
COMAHS	College of Medicine and Allied Health Sciences at USL
CR	Curriculum Review / Curriculum Reform
CVCP	Conference of Vice Chancellors and Principals
DAAD	German Academic Exchange Service
DFID	Department for International Development
DHMT	District Health Medical Team
DVC	Deputy Vice Chancellor
EBKUST	Ernest Bai Koroma University of Science and Technology
EDSA	Electricity Distribution and Supply Authority
EGTC	Electricity Generation & Transmission Authority
EP	Eastern Polytechnic (now: University of the East)
EPA-SL	Environnent Protection Agency Sierra Leone
EQA	External quality assurance
ESG	Evaluation Steering Group
F01, F02, F03, etc	Focus group 1, 2, 3, etc
FAO	Food and Agriculture Organization
FBC	University of Sierra Leone – Fourah Bay College
FCDO	Foreign, Commonwealth and Development Office
FCO	Foreign and Commonwealth Office
FTC	Freetown Teacher's College
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GTI	Government Technical Institute
GWD	Gregor Walter-Drop (Paeradigms Evaluator 1)
HE	Higher education
HEI	Higher education institution
HL	Hannah Lewis (SPHEIR Project Manager)
HRMO	Human Resource Management Office
HTC	Higher Teachers Certificate
I01, I02, I03, etc	Interview 01, Interview 02, Interview 03, etc
ICASL	Institute of Chartered Accountants
ICT	Information and communications technology
INASP	International Network for Advancing Science and Policy
IPAM	Institute of Public Administration and Management at USL
IQA	Internal quality assurance
IT	Information and technology

KCL	King's College London
KNE	Knowledge Network Solutions
LEOCEM	Sierra Leone Cement Corporation
MAFFS	Ministry of Agriculture Forestry and Food Security
MBA	Master of Business Administration
MEL	Monitoring, Evaluation, Learning
MIC	Ministry of Information and Communication
MMCET	Milton Margai College of Education and Technology
MoE	Ministry of Energy
MoHS	Ministry of Health and Sanitation
MoIC	Ministry of Information and Communication
MoU	Memorandum of Understanding
MSC	Most significant change
MTHE	Ministry of Technical and Higher Education
NaCCED	National Council for Civic Education and Development
NaCSA	National Commission for Social Action
NaFFSL	National Federation of Farmers Sierra Leone
NASSIT	National Social Security and Insurance Trust
NATCOM	National Telecommunications Commission
NCTVA	National Council for Technical, Vocational Awards
NGO	Non-governmental organisation
NMA	National Minerals Agency
NMSA	National Medical Supplies Agency
NQF	National Qualifications Framework
NQFTESL	National Qualification Framework for Tertiary Education in Sierra Leone
NRA	National Revenue Agency
NU	Njala University
NV	Nina Volles (Paeradigms Evaluator 2)
OBE	Outcome-based education
OO	Own observation
PCU	Project Coordination Unit
PG	Post-graduate
Pharm D	Doctor of Pharmacy
PMB	Project Management Board
PBSL	Pharmacy Board Sierra Leone
PERC	Professional Engineers Registration Council
PSSL	Pharmaceutical Society of Sierra Leone
PwC	PricewaterhouseCoopers
QA	Quality assurance
QM	Quality management
READ-SL	Rural Energy Awareness and Development – Sierra Leone
SALWACO	Sierra Leone Water Company
SAP	Supervised Agricultural Practice
SDG	Sustainable Development Goals
SE	Stakeholder engagement
SL	Sierra Leone
SLARI	Sierra Leone Agricultural Research Institute
SLCB	Sierra Leone Commercial Bank
SLeCAD	Sierra Leone Chamber for Agribusiness Development

SL-HE	Sierra Leone Higher education
SL-HEIs	Sierra Leone Higher education institutions
SLIE	Sierra Leone Institute of Engineers
SPHEIR	Strategic Partnerships for Higher Education and Reform
STEM	Science, Technology, Engineering, and Mathematics
TEC	Tertiary Education Commission
ToC	Theory of change
ToR	Terms of reference
TVET	Technical and Vocational Education and Training
TWG	Technical working group
UIUC	University of Illinois Urbana-Champaign
UniMak	University of Makeni
USL	University of Sierra Leone
VC	Vice-Chancellor
WASSCE	West African Senior School Certificate Examination
WHH	Welt Hunger Hilfe
WOFHRAD	Women's Forum for Human Rights and Democracy
WP	Work Package
YPhG	Young Pharmacists Group

1 Introduction

1.1 Context and Task

The project "Assuring Quality in Higher Education in Sierra Leone (AQHEd-SL)" is part of the “Strategic Partnerships for Higher Education (SPHEIR)” programme originally developed by the Department for International Development (DFID) and – upon DFID’s merger with the Foreign and Commonwealth Office (FCO) in September 2020 – supported by the British Foreign, Commonwealth and Development Office (FCDO). The SPHEIR programme as a whole was set up in 2016 with the aim to support higher education transformation in focus countries in Sub-Saharan Africa, Asia, and the Middle East. SPHEIR is managed by a consortium led by the British Council in association with PricewaterhouseCoopers and Universities UK International. In a competitive bidding process, eight collaborative partnerships were selected for funding by SPHEIR, one of which was AQHEd-SL. AQHEd-SL was formally launched in April 2018 and scheduled to run through September 2021 (in the summer of 2021, an extension was granted until December 2021).

Consistent with SPHEIR’s overall objectives, the aim of AQHEd-SL is to achieve transformational change in the higher education (HE) system of Sierra Leone by introducing high-quality outcome-based education tailored to actual labour market demand. King’s College London (KCL) serves as Grant Agreement Holder and Central Fund and MEL manager for AQHEd-SL. In this capacity, it commissioned Paeradigms in May 2021 to conduct a summative evaluation of the entire project – as an independent and external evaluator. The evaluation assessed the project’s progress in achieving its core outcomes, evaluated the project’s original Theory of Change and investigated how and why change has happened and for whom. This final report summarises the findings of the summative evaluation. These findings are to be used by the project's stakeholders – *inter alia* – to inform future (project) activity and advocacy.

1.2 The AQHEd-SL Project

1.2.1 Structure and Stakeholders

AQHEd-SL’s original SPHEIR project proposal was based on an initial consortium of nine partners. Six of these partners were from Sierra Leone: Three Sierra Leonean universities (The University of Sierra Leone, USL; Njala University, NU, and The University of Makeni, UniMak), a regulatory body (Tertiary Education Commission, TEC), a professional organisation (Sierra Leone Institute of Engineers, SLIE), and a civil society organisation focused on gender issues (The 50/50 Group). The Sierra Leonean institutions were supplemented by three international academic/NGO partners: King’s College London (KCL), the University of Illinois Urbana-Champaign (UIUC) and the International Network for the Availability of Scientific Publications (INASP), an international higher education development agency.

While the original consortium was already rather large, the actual institutional structure of AQHEd-SL developed into something even more complex. *First*, the University of Sierra Leone (USL) is participating in the project via two (of its three) sub-institutions, i.e. Fourah Bay College (FBC) and the

College of Medicine and Allied Health Sciences (COMAHS). This is significant because they have been active within AQHEd-SL in different academic fields (engineering versus pharmacy). *Second*, each of the original four academic Sierra Leonean institutions has collaborated other Sierra Leonean academic institutions (in the project terminology called “waterfalling institutions” or "observing institutions") to increase the breadth and impact of the work of AQHEd-SL. *Third*, there are Project Management Institutions, most notably the British Council (as SPHEIR manager), and KCL that served as the central fund manager (with core competence in Monitoring and Evaluation, MEL). Finally, the project itself created a Project Management Board (PMB; located at USL) and a Project Coordinating Unit (as a joint USL-KCL body). The total number of institutional stakeholders is thus 16 – listed below in table 1:

#	Institutional Stakeholders	Type of organisation	Location
Higher Education Institutions in Sierra Leone			
	University of Sierra Leone (USL):	HEI / Lead	Sierra Leone
1	• Fourah Bay College (FBC)	HEI	Sierra Leone
2	• College of Medicine & Allied Health Sc. (COMAHS)	HEI	Sierra Leone
3	Njala University (NU)	HEI	Sierra Leone
4	University of Makeni (UniMak)	HEI	Sierra Leone
5	Freetown Teacher’s College (FTC)	HEI	Sierra Leone
6	Milton Margai College of Education and Tech. (MMCET)	HEI	Sierra Leone
7	Eastern Polytechnic (EP)	HEI	Sierra Leone
8	Ernest Bai Koroma U of Sc. and Technology (EBKUST)	HEI	Sierra Leone
Non-Higher education institutions in Sierra Leone			
9	Tertiary Education Commission (TEC)	Regulatory body	Sierra Leone
10	Sierra Leone Institute of Engineers (SLIE)	Professional body	Sierra Leone
11	The 50/50 Group	NGO	Sierra Leone
International (academic) NGOs			
12	University of Illinois Urbana-Champaign (UIUC)	HEI	USA
13	Int. Network for Advancing Science and Policy (INASP)	HE development NGO	International
Project Management Institutions			
14	British Council	(QUA)NGO	UK
15	King’s College London (KCL)	HEI/Fund&MEL manager	UK
16	Project Management Board/Project Coordinating Unit	AQHEd-SL Institutions	Sierra Leone

Table 1: Summary of institutional stakeholders in AQHEd-SL

From a stakeholder perspective, it is important to note that, in particular, the *Sierra Leonean HEIs* (#1 - #8) represent a number of different stakeholder groups. Typically, for HEIs these are (a) students, (b) academic staff, and (c) managerial staff. In the case of AQHEd-SL, there is a subset of the latter two groups constituting (d) HEI-specific project "protagonists", i.e. those members of the academic staff and the managerial staff that have been actively involved in AQHEd-SL (e.g. as Cluster leaders/members of the project implementation task force, etc). On top of this, there is an additional set of stakeholders “around” the HEIs that are rather important given the aims of the project. In particular, this refers to (e) employers (businesses or public institutions) and (f) regulatory agencies with a specific interest in the respective academic field (e.g. pharmaceutical regulatory agencies, etc). NB: In project language, only groups (e) and (f) are referred to as "stakeholders" (in the context of "stakeholder engagement/involvement" activities).

The *non-HEI institutions in Sierra Leone* involved in the project played different roles and had different effects on the long-term impact of AQHEd-SL. The TEC (#9) is an SL regulatory body of high strategic value for the long-term impact of the project. SLIE (#10) is a professional organisation with a specific role in the broader field of STEM/engineering. The 50/50 Group is an NGO that played a key role in gender awareness and gender issues across almost all project activities.

The *International (academic) NGOs*, UIUC (#11) and INASP (#12) served specific functions for the project (in particular with regard to curriculum reform and teacher training) but were not involved in all activities across the board.

Finally, there are the three *project management institutions*: The British Council (#14) served (together with PwC and Universities UK) as the programme manager for the overall SPHEIR programme. KCL (#15) served as Grant Agreement Manager for AQHEd-SL (and also as MEL manager). Last but not least, AQHEd-SL itself created two important management institutions (#15): the PCU (a joint USL-KCL-NU-SLIE body) and the PMB (led by USL with members from all involved institutions) that co-ordinated all the project's activities since its establishment.

1.2.2 Project Goals and Theory of Change

The fundamental task of AQHEd-SL was to achieve transformational change in the HE system of Sierra Leone. This is to be understood against the backdrop of a number of *significant structural deficits* in the Sierra Leonean higher education system. These deficits can be summarised by five key points (original grant proposal, section 4.4):

1. Poor financing of higher education institutions in Sierra Leone.
2. Limited relevance of existing programmes (not adequately addressing national needs).
3. Weak curriculum delivery (based on a traditional teacher-centred approach).
4. High drop-outs rates and graduates without employable skill sets.
5. Weak and incomplete internal quality management systems and incomplete national accreditation system.

The original theory of change (ToC) sought to address all of these problems – with the notable exception of #1 as the SPHEIR programme had neither the capacity nor the strategic intention to address general funding problems in the HE sectors of its target countries/regions. While originally not quite as concisely formulated, the ToC narrative in the grant proposal can be summarised as follows:

- *Stakeholder engagement* activities were supposed to help improve the relevance of curricula and improve the employability of graduates (problems 2 and 4) while also informing unified regulatory guidelines for HE (see below).
- Systematic *Curriculum review* activities were supposed to serve the same purposes (problems 2 and 4).
- *Lecturer training* was supposed to improve the quality of curriculum delivery (problem 3) and reduce the number of drop-outs (problem 4).
- The *establishment of internal quality assurance units* (IQA) was supposed to directly address problem 5 while improving teaching (problem 3) and reducing dropout rates (problem 4).
- The *establishment of common regulatory frameworks and guidelines* for curriculum realignment, quality assurance, capacity development and – not least a unified National

Qualifications Framework (NQF)— was supposed to standardise these activities across various HEIs while allowing students increased national (and international) mobility across programmes and institutions (addressing problems 4 and 5).

1.2.3 Project Workstreams

After its inception phase, the project was structured by three core work packages (WPs): (1) Stakeholder Engagement (SE), (2) Quality Management Systems, and (3) Integration of outcome-based education (OBE) by means of curriculum revisions (CR). Each of the WPs was to be implemented by technical working groups (TWGs) – each chaired by one "lead institution". In addition, four topical "Clusters" had been formed for different academic fields, and in each of these an "anchor institution" (a consortium member from the original grant proposal) cooperated with a "waterfalling institution" – primarily in curriculum review activities (see table 2), while other HEI stakeholders served as observers.

CLuster	Anchor Institution	Waterfalling Institution	Observers
STEM	University of Sierra Leone (USL) – Fourah Bay College (FBC)	Eastern Polytechnic (EP)	Njala University (NU), Milton Margai College of Education and Tech. (MMCET), Freetown Teacher's College (FTC)
Health	University of Sierra Leone (USL) – College of Medicine and Allied Health Sciences (COMAHS)	Ernest Bai Koroma University of Science and Technology (EBKUST)	Njala University (NU), University of Makeni (UniMak), Eastern Polytechnic (EP), Milton Margai College of Education and Tech. (MMCET)
Agriculture	Njala University (NU)	Milton Margai College of Education and Technology (MMCET)	University of Makeni (UniMak), Freetown Teacher's College (FTC), Ernest Bai Koroma U of Sc. and Technology (EBKUST), Eastern Polytechnic (EP)
Management	University of Makeni (UniMak)	Freetown Teacher's College (FTC)	Njala University (NU), Ernest Bai Koroma U of Sc. and Technology (EBKUST), Eastern Polytechnic (EP), Milton Margai College of Education and Tech. (MMCET), Institute of Public Administration and Management (USL-IPAM)

Table 2: AQHEd-SL Cluster set-up

In the practical work of AQHEd-SL, the distinction between the work packages turned out to be somewhat artificial and led to a duplication of efforts and a lack of coordination (e.g. WP/TWG3, at its core, revolves around curriculum review, but WP/TWG1 was a direct part of curriculum review as well since stakeholder input was supposed to be decisive for curriculum review). Following a "consolidation process" in March 2019, the work package structure was thus de-emphasised. The

fundamental tasks from these work packages, however, remained the same while being closely integrated with the work of the Clusters, which de facto now formed some of the core working units of the project in the field of both stakeholder engagement (SE) *and* curriculum review (CR). In addition to CR and SE activities in the topical Clusters, AQHEd-SL pursued cross-cutting activities that brought members of all Clusters together on a regular basis. This specifically concerns activities with regard to quality assurance, templates and standardisation and training measures (most for academic staff).

Rather than following the original "work packages", it is thus possible to structure an overview of AQHEd-SL's activities by these (curriculum review focused) "Clusters" as well as the other key activities that were undertaken in the project. **It is remarkable to note that all of these activities were already mentioned in the original ToC (see above).** While the formation of the Clusters was only developed once the project had started, all the basic activities of the original ToC remained the key "work streams" of the project. Table 3 summarises these core work streams of AQHEd-SL that also informed the structure of the summative evaluation, as it is presented below.

AQHEd-SL Workstream	Most active institutional Stakeholders
Curriculum Review and Stakeholder Engagement in STEM	University of Sierra Leone (USL) - Fourah Bay College (FBC) and Eastern Polytechnic (EP)
Curriculum Review and Stakeholder Engagement in Health	University of Sierra Leone (USL) - College of Medicine and Allied Health Sciences (COMAHS) and Ernest Bai Koroma University of Science and Technology (EBKUST)
Curriculum Review and Stakeholder Engagement in Agriculture	Njala University (NU) and Milton Margai College of Education and Technology (MMCET)
Curriculum Review and Stakeholder Engagement in Management	University of Makeni (UniMak) and Freetown Teacher's College (FTC)
Quality Assurance	Tertiary Education Commission (TEC) + all involved HEIs (in terms of Internal QA)
Template Development and Standardisation	University of Sierra Leone (USL) - Fourah Bay College (FBC)
Training	All SL HEIs and University of Illinois Urbana-Champaign (UIUC) and Int. Network for the Availability of Sc. Publications (INASP)
Project Management and Governance	King's College London (KCL) and Project Management Board/Project Coordinating Unit

Table 3: The main work streams in AQHEd-SL and their institutional protagonists

1.3 The Summative Evaluation

1.3.1 Methodology and Approach

Broadly speaking, the AQHEd-SL summative evaluation has three key characteristics: It proceeds on *four different levels of analysis*, it employs a *utilisation-focused approach*, and it follows a *participatory approach*.

1.3.1.1 Levels of Analysis

AQHEd-SL is analysed on four different levels of analysis: output, outcome, impact, and "lessons learned".

a) *Output*: On this level of analysis, the project activities are mapped as different process streams over the funding period as outlined above, i.e. with regard to CR/SE (in the four Clusters), quality assurance, template development and standardisation, training, and project management proper. They are then evaluated relative to the original plan of activities as well as suitability to task in terms of subsequent adaptations. The evaluation perspective will thus not only be: Did the project do what it intended to do? It will also ask: Did the project adapt its operational goals in a way that meaningfully responded to changing conditions/challenges?

b) *Outcome*-level analysis is dedicated to the intended and unintended consequences of the activities identified on the output level, which are then evaluated relative to the project's original goals. Thus, while output analysis asks, e.g. which CR or SE activities were undertaken, the outcome level evaluates whether the project was successful in terms of creating:

- Sustainable curriculum reform in terms of labour market needs and employability.
- Sustainable and effective structures for stakeholder involvement.
- Innovation in teaching and learning methods.
- Spread of reform ideas within and across universities.
- Sustainable and effective capacity and structures of quality assurance.
- Capacity building for project management, financial reporting, and MEL.
- Gender-inclusivity and diversity.

c) *Impact*: This is the broadest level of analysis, which asks about the contribution of outputs and outcomes to overall goals intended by the project. In the present context, this refers to the long-term goals of AQHEd-SL in particular and SPHEIR in general[1]. Impact-level evaluation thus asks broad questions about:

- Changes in graduate qualification and employability relative to labour market needs.
- Improved overall quality of the HE sector.
- Systemic reforms and strengthened regulatory framework for HE.

With the project's lifetime set to 3.5 years, it may be too early to discern the overall impact, but some indications should be visible.

[1] See SPHEIR: Theory of Change;
https://www.spheir.org.uk/sites/default/files/spheir_theory_of_change_2021_march.pdf

d) *Lessons Learned*: Since it is the explicit intention of the summative evaluation to inform future activities of various stakeholders, the entire evaluation team has concluded that it is helpful to add "lessons learned" as a separate level of analysis. Under this heading, various stakeholders were asked to voice criticism, summarise their conclusions about the conditions for success/failure, and contribute their ideas about the future in the context of AQHEd-SL, its activities, its effects, its governance, its internal structures, etc. The "lessons learned" are thus collected from the perspective of the stakeholders and refined in discussions with them.

1.3.1.2 Utilisation-Focused Approach

The utilisation-focused approach puts an emphasis on the intended users and the intended use of the evaluation results. Methodologically speaking, this approach calibrates the evaluative procedures by its users and their uses. First, a utilisation-focused approach carefully identifies the primary intended users, i.e. people who have a direct, identifiable stake in the evaluation as well as their intended use of the evaluation. Second, the evaluation questions and the data collection procedures are adapted to the line-up of intended users and use (e.g. questions that inform future fund managing and MEL differ from those that inform future HE reform). This step is sensitive to the individuals involved as well as their respective contexts. During the inception phase of the summative evaluation, the evaluation team identified the key stakeholders for the utilisation-focused approach along with the primary intended uses and corresponding key evaluation questions (see table 4). Because of the large number and variety of stakeholders, a certain selectivity was necessary. Primary stakeholders for the utilisation-focused approach are thus: (a) the HEIs, (b) SL regulatory bodies, (c) the gender-oriented NGO, and (b) the management stakeholders. Table 5 summarises the results of this step and specifies the intended uses as well as the corresponding evaluation criteria/questions.

Stakeholders / Intended Users	Intended Use / Lessons for…	Key evaluation questions
HEIs • SL HEIs • UIUC / INASP	Continuous CR Continuing stakeholder engagement Continuing teaching training Continuing QM Future Interaction with regulators Future Interaction with donors Further project application Further collaboration among SL-HEIs	What was achieved in terms of output/outcome/ impact? Vertical spread? Lateral spread? Internal spread? External spread? Is there a lock-in of reform? How have relations with regulators changed? How have relations to stakeholders/employers changed? What is to be learned for collaboration among SL-HEIs? What are the lessons for further projects?
Regulators • TEC • Ministry (MTHE)	Further development of education sector in SL Templating for CR, training and QM Further applications	Is there a lock-in of reform? Can reforms be spread? Which further projects could be helpful?
NGO • 50/50-group	Gender Policy and Awareness in SL-HE and beyond	What are the lessons for gender policy in SL-HE?
Management • PCU/PMB • KCL • BC	To demonstrate accountability To feedback into overall SPHEIR evaluation To improve project management To further project application To inform further management To inform further programming	Were the targets fulfilled? Was the project well-run? Was management effective? What are the needs/lessons for further projects? What are the lessons for MEL? Was transformative change achieved? Which further projects could be helpful?

Table 4: Key stakeholders/users of the evaluation and intended primary use

1.3.1.3 Participatory Approach

The third methodological element of the evaluation is the participatory approach, i.e. the active involvement of stakeholders in the evaluation process. This serves three core functions:

1. Participation, "buy-in", and ownership greatly increase the quality of evaluation data and results since stakeholders understand their situation better than external actors and are often better able to explain what has changed and why. In addition, participation allows a wider range of perspectives into the analysis.
2. The active involvement of users greatly increases the chance of usability and actual use of evaluation results. With their own pro-active participation, stakeholders can shape the evaluation to maximise its usefulness for their purposes.
3. The participatory approach can make the evaluation itself a learning and capacity-building exercise with positive side effects for the final months of the project as well as beyond the framework of AQHEd-SL (commitment, ownership, and empowerment are key).

During the inception phase, and based on the stakeholder mapping, Paeradigms discussed with representatives of the PCU the selection of stakeholders (resp. stakeholder representatives) for the participatory approach. As with the utilisation-focused approach, such a selection was necessary because of the highly differentiated stakeholder landscape of AQHEd-SL. To further improve the practical applicability of the participatory approach, three decisions guided the selection process:

1. to limit the participatory approach to project staff (either in project management or staff academic or managerial positions at HEIs that were highly active in AQHEd-SL).
2. to distinguish between "full participation" (in the entire summative evaluation process) and "specific participation" (specific to Cluster and/or thematic activities).
3. to consider the specific project activity streams, i.e. Cluster-specific curriculum review proper, teaching methodology, training template development process, quality management activities.

Cluster /activity stream / core managers	Participation Type	Who?	Names
STEM Cluster (FBC + EP)	specific	1 representative per HEI + PO	Samba Sesay (FBC) + Sulayman Mansaray (EP) + Franklyn Surian (PO-STEM)
Health Cluster (COMAHS + EBKUST)	specific	1 representative per HEI + PO	Joseph Edem-Hotah (COMAHS) + Abdul Karim Koroma (EBKUST) + Boiima Manyeh (PO-Health)
Agriculture Cluster (NU + MMCET)	specific	1 representative per HEI + PO	Sanpha Kallon (NU) + Alhaji Sankoh (MMCET) + Monyah Konneh Jr (PO-Agriculture)
Management Cluster (UniMak + FTC)	specific	1 representative per HEI + PO	Santigie Kaba (UniMak) + Prince Brainard (FTC) + Saio Kinthor (PO-Management)
Teaching methodology-group	specific	1 representative	Hannah Lewis
Template development-group	specific	1 representative (chairperson?)	Badamasi Savage (SLIE))
Quality management-group	specific	1 representative (chairperson?)	Ronnie Frazier Williams (TEC)
KCL	full	1 representative	Hannah Lewis
PCU + PMB	full	1-2 key representatives	Samuel Weekes Jonas Redwood-Sawyerr

Table 5: Overview of stakeholder representatives participating in the evaluation

1.3.2 Data Sources

To operationalise the comprehensive multi-level evaluation approach, a variety of primary and secondary sources and a mixed-methods approach was necessary. The rationale behind a mixed methodology is not only to maximise the available information but also to triangulate data, i.e. to compare statements in interviews with written documentation and/or other findings to maximise the validity of conclusions while minimising the "triangle of error".

Secondary data sources include the existing project documentation (mid-term review, bi-annual MEL reports, MEL documents, grant stage 1 documents, etc), which contains both quantitative and qualitative data (number of programmes/modules revised, number of stakeholders engaged, and lecturers trained, etc). Most *primary data* is gathered during the field phase through individual interviews, focus group discussion (including participant observation) involving internal and external project stakeholders. The absence of baseline data mentioned in the ToR can be counter-balanced by tapping into data from the quarterly and bi-annual MEL reports as well as the mid-term review (February 2020). Paeradigms offers an advantage in that the evaluator who carried out the mid-term review is the Project Lead of the summative evaluation. Table 6 offers the connection between the different evaluation levels, the methods and data used, and the respective evaluation criteria.

	Method	Data	Core criteria
Output Level	• Desk research • Interviews/focus groups	• Project documentation • AQHEd-SL/partner data • Field data	• Fitness to task • Appropriate roll-out • Adaptive flexibility
Outcome Level	• Desk research • Interviews/focus groups • Participant observation • MSC-technique	• Project documentation • Field data	• Relative effectiveness (measured against intended goals and unintended effects)
Impact Level	• Desk research • Interviews/Focus groups • Participant observation • MSC-technique	• Project documentation • Macro-level data • Field data	• Absolute effectiveness (measured against long-term SPHEIR goals) • SDG-impact
Lessons Learned	• Interviews/Focus groups	• Field data	• Usability for future (project) work

Table 6: Connection between different levels of evaluation, methods, data, and evaluation criteria

1.3.3 Evaluation Process

The overall evaluation was divided into five phases: (1) Inception Phase, (2) Data and Development Phase, (3) Field Phase, (4) Data Analysis and Report Writing Phase, and (5) Validation and Report Revision Phase.

The *Inception Phase* was dedicated to (a) reaching a consensus on the approach and methodology of the evaluation (this included adding "lesson learned" as a separate level of analysis to the analytical framework) and (b) conducting a comprehensive stakeholder analysis (see above). This, in turn, informed (c) the operationalisation of the utilisation-focused approach (identifying key intended users and the intended use) as well as the implementation of the participatory approach (identifying the fully participating evaluation committee as well as the specific participation of different key actors in the evaluation of the individual AQHEd-SL work streams. The results were summarised in the inception report.

The *Data and Development Phase* started with the collection and analysis of secondary data that was submitted by AQHEd-SL project management to the Paeradigms evaluation team. This data comprised, in particular, the original grant application along with the grant agreement and grant stage 1 documents, results framework and key MEL documents along with quarterly and annual reports. Part of the secondary data were also the key HE policy documents produced by AQHEd-SL itself – in particular, the Curriculum Review Handbook, the QA Manual, the Pedagogical Training Manual, as well as the (then) draft National Qualification Framework (NQF). These documents are of particular importance for the work streams "Quality Assurance" and "Template Development and Standardisation". The analysis of this secondary data clarified where and how additional primary data input was needed. Accordingly, this phase of the evaluation was also dedicated to the development of questionnaires, interview guidelines, and focus group guides for the field phase, along with the identification of the most suitable interview partners, the members of the respective focus groups, etc. In all this, the AQHEd-SL management team provided highly needed support for preparing the field phase.

While the proposal of the evaluation considered the risk of the Covid-19 pandemic significantly impeding the field phase, circumstances allowed it to proceed as planned (Covid-19 rules such as mask-wearing, the use of well-ventilated rooms, frequent use of sanitisers/disinfectants, etc were observed). The *Field Phase* thus took place between 30 Jul and 08 Aug 2021, with two Paeradigms evaluators travelling to and within Sierra Leone. Over the course of seven days, 11 individual interviews were conducted along with 14 focus group discussions with a total of 80 participants. The number of participants in each focus group discussion varied between five and eight (with an average of 5.7). The bulk of the focus group discussions was designed in such a way that the largest stakeholder groups were covered in each of the topical Clusters introduced above. This implied focus group discussions with (a) academic staff, (b) employers and regulators ("stakeholders" in AQHEd-SL terminology), and (c) students from STEM, Health, Agriculture, and Management. Focus group members were mostly chosen on the basis of their active participation in AQHEd processes.

The remaining two focus group interviews covered (internal and external) quality assurance as well as the institutional leadership of UniMak and the financial management team in AQHEd-SL's PCU. The individual interviews focused on gathering information on AQHEd-SL from key individuals who had played an important role in the design and inception of AQHEd-SL as well as its management over the lifetime of the project (USL / KCL / PCU / PMB). Most interviews and focus group discussions were done at various institutions in Freetown; some were conducted at the University of Makeni in Makeni. Visits to other HEIs upcountry (EP at Kenema, EBKUST at Port Loko, etc) – would have cost too much time because of the road conditions in the rainy season. For the remainder of this report, all interviews and focus group discussion are given short identifiers that are comprised of (a) the type of primary data collection ("I" = interviews; "F" = focus group discussion) along with a two-digit counter that was assigned chronologically in the order that the primary data collection took place. Table 7 summarises

the setup of most of the focus group discussions. For a complete overview of all interviews and focus group discussions see annexe 4.2. Overall, evaluators interacted with a total of 91 individual stakeholders involved in AQHEd.

Cluster	Academic Staff	Employers/ Regulators	Students
Health	Focus Group F03	Focus Group F05	Focus Group F07
STEM	Focus Group F04	Focus Group F06	Focus Group F08
Agriculture	Focus Group F10	Focus Group F12	Focus Group F13
Management	Focus Group F09	Focus Group F11	Focus Group F14

Table 7: Cluster-specific Focus Group Discussions During the Field Phase

In the *Data Analysis and Report Writing Phase*, the evaluation team analysed audio recordings and notes from the field phase and triangulated them with information gathered on the basis of secondary data. Whenever necessary, additional secondary data was supplied by the AQHEd-SL project management team. The results of the analysis were summarised in the draft version of this report. This draft, in turn, formed the basis of the *Validation and Report Revision Phase*, in which the draft was discussed in a validation workshop. The workshop brought together once more the members of the evaluation committee as selected in the operationalisation of the participatory approach. Based on the feedback from this workshop, the report was eventually revised and submitted in a final version.

2 Evaluation Results by Work Stream

2.1 CR/SE in the STEM Cluster

Type	Institution	Programme under Review in AQHEd-SL
Anchor	University of Sierra Leone (USL) - Fourah Bay College (FBC)	Bachelor of Engineering (BEng)
Waterfalling	Eastern Polytechnic (EP)	BSc in Civil Engineering
Observers	Njala University (NU) Milton Margai College of Education and Tech. (MMCET) Freetown Teacher's College (FTC)	

Table 8: The STEM Cluster

The STEM Cluster is comprised of members of the Departments of Engineering at Fourah Bay College (USL-FBC) – which serves as anchor institution – and Eastern Polytechnic (EP) – which serves as waterfalling institution for the STEM field. Academic Staff from Njala University (NU), Milton Margai College of Education and Tech. (MMCET), and Freetown Teacher's College (FTC) served as observers of the CR/SE processes in STEM. The STEM Cluster plays a particular role for AQHEd-SL as a whole. Most of the core actors that drove the application process as well as the political process around the project are from the STEM field – in and around the engineering department at USL-FBC. Even before the advent of AQHEd-SL, there was widespread consensus in FBC's engineering department that the curriculum needed reform (F06). While the programme was accredited, and graduates were still accepted for post-graduate studies at many institutions overseas (I05), the curriculum was considered "aged" and too disconnected from real-world application (F06). It thus does not come as a surprise that in a comparison across AQHEd-SLs Clusters, both CR and SE in the STEM Cluster, went particularly far. Both institutions collaborated closely early on. As in some of the other Clusters, "waterfalling" was not a sequential process to curriculum review at the anchor institution, but a parallel one (F04, F06, F08).

2.1.1 Output Level

The STEM Cluster selected two engineering degrees for **curriculum review**: The **Bachelor in Engineering (BEng) at FBC** and the **BSc in Civil Engineering at EP**. The USL/FBC 5-year BEENG has a total of 50 modules. Of these, 38 were selected for revision, 22 for major revisions, 16 for minor revision. By the summer of 2021, **all of these revisions had been fully implemented,** i.e. there had been stakeholder input, actual revision, approval and rollout. Changes, however, are not limited to an update of the content of individual modules. There were also new and innovative modules introduced (software engineering, computer modelling, power quality, electricity planning; F08, F04); an entirely new option for specialisation was introduced (electronics/ICT option; F08); and overall student choice was significantly increased by allowing more flexibility to choose modules from different departments.

At EP, the changes to the **BSc in Civil Engineering** were no less sweeping. All of its 65 (!) modules were selected for revision, and **all of them were actually revised, approved, and implemented**. Structural changes at the BSc in Civil Engineering included swapping of new for old modules and overall updated content. Overall, students (!) described the programmes as now being tailored to what is actually required by employers while redundancies were eliminated; "irrelevant" content was cut (F08).

Stakeholder Engagement was an integral part of the curriculum review process. Both FBC and EP were very active in engaging stakeholders, and this work was highly appreciated by the academic staff members (F04). A significant part of SE work was done by FBC and EP together. The collaboration comprised 19 institutions and 25 unique individuals from the public, private, and 3rd sectors, as well as STEM students (see overview in table 9) who were invited to various workshops and other fora. While the line-up of ministries and public actors is significant, the 3rd sector, was "only" represented by one NGO and the students.

Cluster	Public	Private	3rd Sector
STEM - Engineering	• Electricity Distribution and Supply Authority (EDSA) • Ministry of Water Resources • Ministry of Works • National Commission for Social Action (NaCSA) • National Council for Civic Education and Development (NaCCED) • National Telecommunications Commission (NATCOM) • Professional Engineers Registration Council (PERC) • Sierra Leone Electricity and Water Regulatory Commission	• AI Networks • CEMMATS Group Ltd. • Consultant Software Engineer, US • International Procurement & Construction Services (IPCS) • Knowledge Network Solutions (KNS) • Prime Engineering Solutions • SierraTel • Sierra Leone Institution of Engineers (SLIE) • Techsult & Co. Ltd.	• Rural Energy Awareness and Development - Sierra Leone (READ-SL) • Students

Table 9: Stakeholder Engagement in the STEM Cluster

2.1.2 Outcome Level

The results of ***curriculum review*** in the STEM Cluster were universally praised – across institutions and across stakeholder groups. Referring to both CR proper and teacher training (see below section 2.7), *faculty* spoke about a "paradigm shift" in teaching; a universal "shape up" of content and teaching skills; and a narrowing of the "skills gap" between academic skills and soft skills – on the side of teachers and students alike (F04). Particular importance was attributed to clearly defined learning outcomes compatible with international standards as well as professional ethics. *Employers* claimed that CR had advanced the engineering curricula from an "advanced high school level" to a "university degree with a perspective of real-world problems". They highlighted the expanded skillset and the increased employability of graduates (F06). Students were united in their appraisal of CR as a "game-changer" in their studies that gave them both more choice and more relevant academic content, which, in turn, was very significant for their motivation (F08). However, it

should be noted that all three stakeholder groups also mentioned that while modules and content were significantly upgraded, actual module delivery was still significantly impacted by lack of access to physical teaching tools (F04, F06, F08). This refers to computer hardware as well as to lab equipment and consumables of any kind.

> ***"Ultimately relationships are based on value creation."***
> *Employer Representative in Engineering, F06*

Stakeholder engagement was also described as a "win-win-win" situation for academic staff, students and employers/regulators alike (F04, F06, F08). Faculty claimed that SE had played a key role in the overall success of the project (F04) – particularly because stakeholder involvement in CR became the starting point for various other stakeholder activities. Examples include apprenticeship schemes, internships, guest lectures, common workshops, professional exchange, knowledge sharing, common projects and even the participation of stakeholders in theses defences. At both HEIs, AQHEd-SL stakeholder work was seen as a "paradigm shift" "bringing us together". In some cases, even MoUs have been signed to formalise the connection between HEIs and stakeholders (F04). Some faculty members went as far as arguing that close collaboration with industry could offset some of the deficits in physical reaching tools/equipment as practice elements in the study programmes allow students to get at least some hardware access outside the university (F04). Employers praised the tangible benefits that SE brought them (see box). Students claimed that SE was most useful to them if it allowed for networking opportunities, and there could be even "more of it" (F08). In this context, guest lectures and internships were particularly appreciated if they allowed them to get in touch (and sometimes stay in touch) with practitioners. Students described this as "game changers" (F08).

Another outcome of the CR/SE-work in the STEM Cluster appears to be a fundamental shift in the **relationship between FBC and EP**, which is (a) significantly denser, and (b) much less hierarchical than before (F04). In this context, AQHEd-SL has contributed to the formation of an academic community of peers that did not exist to the same degree beforehand (F04).

2.1.3 Impact Level

Overall, there can be little doubt that because of CR and SE in STEM there have been significant improvements in terms **of graduate qualification and employability** in the two engineering programmes at FBC and EP and that this contributed to a higher quality of this part of the SL HE sector. Aside from the unanimous praise for the CR and SE process, it is significant that students clearly stated that they now feel "much better prepared for the labour market" (F08).

However, the overall impact critically hinges on the spread of reform ideas and approaches beyond two particular academic programmes in the engineering departments of FBC and EP and the sustainable maintenance of stakeholder relations. For the latter aspect, the MoUs (see section 2.1.2 above) and the large variety of ideas for stakeholder involvement *beyond CR* are particularly noteworthy. Concerning the "lateral spread" of CR, it is evident that at FBC, the ideas have spread beyond the programmes and even the departments of engineering (F04). Even more significant in this respect, however, is what has happened at EP. EP has taken the SPHEIR activities in its engineering department as a model for reforms of *all* of its programmes – across the entire institution. The reform templates that were developed in the context of SPHEIR played a particularly important role in this context (see section 2.6). In essence, this means that SPHEIR has not just achieved "waterfalling"; it has achieved "complete lateral spread" at EP (F04). This was only possible because EP had intended to

have its status changed from a "Polytechnic" to a full university – a plan that is older than SPHEIR and that was formally announced in 2017 (F04). Essentially, EP has thus leveraged SPHEIR to upgrade its status and become the "Technical University of the East" (I04) – a process that will still be completed within the lifetime of SPHEIR. **Here, a significant SL HE sector improvement becomes directly visible**. While the transformation of EP might have happened anyway, it would certainly not have happened in the same way, according to this model of CR and SE and at the same speed as it did in the context of SPHEIR. It should also be emphasised that this was achieved without further external involvement (by consultants etc). **It was achieved as a result of capacity-building and empowerment via AQHEd-SL**.

2.1.4 Lessons Learned

Overall, stakeholders considered CR/SE in the STEM Cluster as rather successful – a view that is confirmed by the available "objective" indicators. Stakeholders also had clear views about the conditions that made this success possible. The most significant among them are:

1. Some **key actors** who were highly dedicated to the overall cause and willing to contribute beyond their personal gain – primarily but not only at FBC (F06).
2. For all others: A **mutually reinforcing logic**, by which CR/SE led to personal (academic) "growth", which, in turn, increased the dedication to CR/SE, which increased the benefits, etc (F04).
3. The development of a "**common language**" and "group identity" over the course of the various workshops (F04).
4. Whereas initially, enthusiasm overcame institutional inertia and resistance, now there is **lock-in via QA offices and the NQF** (F04; see section 2.5).
5. A "waterfalling" concept (which, in practice, was rather a collaboration than sequential waterfalling) that was fully endorsed and **supported by HEI leadership** (I05).
6. At EP: A logic, in which the success of SPHEIR translates into contributions to other strategic goals of institutional development, i.e. **institutional interest was leveraged.**
7. The existence of **personal relationships between academics and industry** that could be leveraged for the purposes of initiating SE (F04, F06), but also: **tangible benefits** for both sides from SE or – as one of the employers put it – "value creation" (F06).

Based on some of these considerations, stakeholders also developed ideas about the future:

1. **Training of teaching staff** should be maintained and possibly expanded (F06).
2. Elements of CR-review and faculty training should be "waterfalled" to **secondary education** institutions where the academic level is low, and teaching is sub-par. This makes it harder for incoming students at university than need be and throttles the potential of STEM graduates.
3. **Research** was lacking in the SPHEIR programme despite the fact that research capacity has a powerful knock-on effect on teaching. Follow-up programmes should consider this (F04, F06).
4. SE could be taken multiple steps further. New academic programmes could be **commonly developed**; dissertations could be done in teams, including practice institutions (F06).
5. New programmes should tackle the issue of **physical teaching tools** and materials since module delivery is still significantly impacted by lack of access to such devices.

2.2 CR/SE in the Health Cluster

Type	Institution	Programme under Review in AQHEd-SL
Anchor	University of Sierra Leone (USL) - College of Medicine and Allied Health Sciences (COMAHS)	B Pharm
Waterfalling	Ernest Bai Koroma University of Science and Technology (EBKUST)	BSc in Public Health
Observers	Njala University (NU), University of Makeni (UniMak), Eastern Polytechnic (EP), Milton Margai College of Education and Tech. (MMCET)	

Table 10: The Health Cluster

The Health Cluster is comprised of faculty members of the College of Medicine and Allied Health Sciences (USL - COMAHS) – which serves as anchor institution – and the Faculty of Basic Health Science at the Ernest Bai Koroma University of Science and Technology (EBKUST) – which serves as waterfalling institution. Academic staff from Njala University (NU), University of Makeni (UniMak), Eastern Polytechnic (EP), and the Milton Margai College of Education and Tech. (MMCET) served as observers to the CR/SE processes in the Health field. Work on CR/SE started first at COMAHS (with some modest participation of EBKUST). However, when COMAHS switched the programme under review (see below), both institutions started working in parallel to meet the respective deadlines (I01, F03).

2.2.1 Output Level

The Health Cluster selected two different but related programmes for **curriculum review**: At the College of Medicine and Allied Health Sciences (COMAHS), it was originally a 3-year Diploma in Pharmacy, but following a change in D-VC-leadership at COMAHS at the end of 2018, the programme under review was switched to a **B Pharm**. The reason given at the time was that the opportunities provided by AQHEd-SL should rather be focused on a higher-level programme (equivalent to the programmes under review in the other Clusters). This was compatible with the political intention publicly stated by the Minister of Education, according to which universities (such as USL, of which COMAHS is a part) should focus on degree programmes while TVET institutions should focus on programmes below the BA level. As a result, COMAHS had to start CR activities afresh in May 2019 for the revision of a 5-year B Pharm programme. SE also had to be partly restarted because The B Pharm educates pharmacists rather than the “pharmaceutical technicians” trained on the diploma level. As a result, the switch in programmes implied different employment scenarios and thus at least partly different stakeholders (or stakeholders in different roles). Still, 41 out of the 50 modules of the B Pharm were chosen for review, and by the summer of 2021, **all 41 modules were reviewed, approved and were in the process of roll-out** (I01). This is a **rather significant achievement** given that there is little to no overlap between the Diploma and the B Pharm on the module level and that, thus, COMAHS essentially lost the work of more than one full year after switching the programme under review. Changes are comprehensive and include the reform of existing modules as well as the introduction of new ones. Certain topics such as paediatrics and gynaecology were strengthened and tied to clinical visits. Highly relevant is also the introduction of a business perspective with courses on logistics, supply

chain management and business management; I01, F03, F05). In addition, research methodology and clinical practice were strengthened, as was a focus on patient care (which is part of a more general trend in health education in various countries; I01, F05, F07).

At EBKUST, 28 modules of the **BSc in Public Health** were chosen for review. By **September 2021, all of them were reviewed and approved**, but the roll-out of the revised modules will only start with the beginning of the academic year 2021/22, i.e. in October 2021. Content-wise, the curriculum was simplified and streamlined towards public health; all courses now have clearly defined objectives for both lecturers and students (F03). The collaboration between COMAHS and EBKUST was not quite as smooth and symmetrical as in the case of FBC and EP in the STEM Cluster. EBKUST was initially institutionally less involved and dedicated to AQHEd-SL as a whole (which had to do, among other things with the dynamic institutional development of EBKUST as SL's newest public university and changes in its leadership). As a result, processes started late, but because of the switch at COMAHS were more in sync than they would have been otherwise (F03). In addition, the atmosphere between COMAHS and EBKUST was initially rather competitive. At the time of the evaluation, however, all faculty members involved in the Health Cluster agreed that "people came together over the project and are collaborating now in a cordial and mutually supportive manner" (I01, F03).

Stakeholder engagement in the Health Cluster comprised a significant variety of actors from all three sectors: 27 unique individuals from 26 different organisations and various students (see overview in table 11). Particularly noteworthy is the participation of the Ministry of Health and the Pharmacy Board and the fact that students actively participated in the respective workshops. SE resulted in extensive feedback on relevance and employability. For some participants from both COMAHS and EBKUST, this appeared almost like a "life-changing experience" (I03, F03, F05, F07). SE led them to fundamentally reconsider both the academic content and the skills conveyed in the respective programmes.

Cluster	Public	Private	3rd Sector
Health	• Center for Disease Control and Prevention (CDC) • District Health Medical Team (DHMT) (Bombali) • District Health Medical Team (DHMT) (Western Area Urban) • Environment Protection Agency Sierra Leone • Makeni City Council • Makeni Regional Government Hospital • Ministry of Health and Sanitation • National Medical Supplies Agency • Pharmacy Board Sierra Leone (PBSL) • School of Midwifery, Makeni	• Citiglobe Pharmacy • Cornell Pharmacy • Lifecare Hospital Pharmacy • Everhealthy Pharmacy • Pharmacy Business Association • Sierra Leone Water Company (SALWACO) • Victory Healthcare (SL) Ltd	• Clinton Health Access Initiative (CHAI) • Marie Stopes Sierra Leone • National Association for Pharmaceutical Students (NAPS) • Sierra Leone Nurses Association • Pharmaceutical Society of Sierra Leone (PSSL) • Young Pharmacists Group Sierra Leone • Students

Table 11: Stakeholder Engagement in the Health Cluster

2.2.2 Outcome Level

> ***"I was afraid to share the student feedback as I thought this could lead to a confrontation. But then, at the CR meeting, I was surprised and greatly encouraged as the DVC and everyone applauded my presentation. The DVC said what the students are asking for is what we should be doing. Almost all our points were acted upon. I am really seeing the difference in the new curriculum, especially the clinical pharmacy from first year, they are teaching communication skills and teaching how to read prescriptions."***
> *Student in B Pharm, F07*

Despite the initial difficulties at both COMAHS and EBKUST (which had very different reasons), the **curriculum review** eventually turned out to be both comprehensive and very successful. Lecturers, employers and students agreed that there were changes on all levels (I01, F03, F07), including much more practice orientation (I01, I08, F05, F07). They see the result as a more diverse curriculum implying a much better preparation for the labour market in a significantly wider field. From their perspective, employment options they feel prepared for now include industry, patient care as well as retail pharmacies (F05, F07). Especially the last option is noteworthy since students highlighted that they appreciated being prepared for the business world in general and entrepreneurship in particular. Particularly significant with regard to the consequences of CR is the fact that employers and other stakeholders maintained that they could already perceive a change in students' skills (I08, F05). Students also highlighted that their participation in the CR process, as well as CR proper, also led to an improvement in the overall relationship/atmosphere between lecturers and students (F07).

> ***"I really appreciated learning about business management skills and the research skills. Pharmacy is mostly a business. If we are encouraged at this point to be doing such things, it will help us the future to set up a business plan."***
> *Student in the B Pharm, F07*

Stakeholder engagement was equally successful. Both employers and students highlighted how happy they were with their own involvement in CR that spanned a whole series of meetings (F05, F07). They also emphasised that the revised curriculum was shared so that they could actually trace the impact of their contributions, which they saw as rather significant (F05, F07). The faculty maintained that the inclusiveness of stakeholder engagement added enormous value in terms of the diversity of their views on employability skills. Topics such as supply chain management would not have come up otherwise (I01, F03). It is important for the sustainability of SE that COMAHS plans the institutionalisation of SE in the form of MoUs, in particular for internships, work placements, etc (I01). While some stakeholder cooperation had existed before AQHEd-SL (noteworthy is the traditional link between COMAHS and the Pharmacy Board), it was only AQHEd-SL that "brought us all together" (I09), i.e. that created the notion of a common bond of all pharmacy related actors – both inside and outside academia. Stakeholder relationships established in the context of AQHEd-SL were considered "highly valuable" for the future (I01).

> ***"We realised we are the same and we speak the same language."***
> *Pharmacy Stakeholder Representative, I10*

The **collaboration between COMAHS and EBKUST** had a difficult start. And while the protagonists of both institutions active in AQHEd-SL eventually developed an excellent collegial and cordial relationship, they also emphasised that they form a nucleus of people at the respective organisations who think differently than others. While the CR processes are institutionally locked-in, the sustainability of the working relationship will critically depend on the spread of this mindset (F03).

2.2.3 Impact Level

For the Health Cluster, it is as evident as for the STEM Cluster that CR in the chosen programmes was successful and CR in these programmes is also locked-in. SE, however, is only partly locked-in as MoUs are still intended (not signed), and there is less such initiative at EBKUST (as of summer 2021).

> ***"We can already see that the students graduating now are different. We see tangible differences; the teaching improved and students are more practically focused, more patient focused."***
> *Pharmacy Stakeholder Representative, I10*

Lateral spread can be clearly traced at COMAHS. AQHEd-SL templates are already being used in the reform of the nursing curriculum, and then spread to the medical sciences seems likely (I01, I06). At EBKUST, the lateral spread was also mentioned (F03), but the precise extent remained unclear. In addition, there seems to be friction between the departments at EBKUST with regard to the binding character of AQHEd-SL templates, which are seen by some of the non-participating departments as "impositions" (F03).

2.2.4 Lessons Learned

While CR and SE in the Health were ultimately also successful, the process was more "rocky" than in the STEM Cluster, and lock-in has not developed quite that far with regard to SE and lateral spread. Stakeholders had a series of **observations for the reasons/potential improvements**:

1. It was felt that the full endorsement of reform approaches by HE leadership (VC, Senate, Council) was of decisive importance to get full buy-in and to secure lateral spread. This was less the case at EBKUST than at, say, FBC in the Stem Cluster (F03).
2. There would have been potential for knowledge exchange *between* SPHEIR projects. In the case of the Health Cluster, the "Kenya Nottingham" SPHEIR project focused on the development of a national competency framework for pharmacy education would have been of particular interest (the Kenya-Nottingham project was discontinued in 2020).
3. The health professions, in general, have a high interest in standardisation because there are political and social pressures in this direction. This common interest could have been leveraged better in the context of the AQHEd-SL Health Cluster – in particular with regard to lateral spread (F05).
4. Communication to students about AQHEd-SL could have been better in the sense of more consistent updates and information directly addressed to students.

Concerning **future programmes and reforms,** there were three fundamental topics:

1. While some lab equipment was bought via AQHEd-SL, labs in health (pharmacy) education are still clearly deficient in terms of both hardware and lab consumables (F03, F07).
2. The quality of mentoring at internship should be standardised (in the form of guidelines) and monitored accordingly (F05).
3. The future of the HE in pharmacy in SL was seen in the development and implementation of a Pharm D (Doctor of Pharmacy) as *the* emerging standard in West Africa (this topic came up in

all interviews and focus group discussions on pharmacy). It was seen as a decisive step to improve clinical knowledge and implement a shift toward patient care; I09, F05, F07). There is already significant overlap between a potential Pharm D curriculum and that of the revised B Pharm, but there is a problem with sufficiently qualified teaching staff. In addition, the current B Pharm programme has to be rather long because of the low level of qualification of entering students, which, in turn, is a result of the low level of STEM education in secondary schools. This creates an imbalance between the B Pharm and a potential Pharm D. Finally, hospitals would have to offer the necessary level of practice experience, which is currently difficult. Despite these difficulties, the development of a Pharm D compatible with West African standards (West Africa College of Pharmacists) was seen as the logical and necessary next step after the revision of the B Pharm (I06).

2.3 CR/SE in the Agriculture Cluster

Type	Institution	Programme under Review in AQHEd-SL
Anchor	Njala University (NU)	BSc in Agriculture (General)
Waterfalling	Milton Margai College of Education and Technology (MMCET)	BSc in Agriculture (General)
Observers	University of Makeni (UniMak), Freetown Teacher's College (FTC), Ernest Bai Koroma U of Sc. and Technology (EBKUST), Eastern Polytechnic (EP)	

Table 12: The Agriculture Cluster

The Agriculture Cluster is comprised of members of Njala University's (NU) main entity, the School of Agriculture and Food Sciences – which served as anchor institution – as well as academics from the Milton Margai College of Education and Technology (MMCET – which served as waterfalling institution for the Agriculture field). Academic staff from University of Makeni (UniMak), Freetown Teacher's College (FTC), Ernest Bai Koroma University of Sc. and Technology (EBKUST), Eastern Polytechnic (EP) served as observers to the CR/SE processes in the Agriculture field. Both institutions were already affiliated before AQHEd-SL, with some of MMCET's programmes accredited by NU and NU conducting examinations together with colleagues from MMCET *at* MMCET (F10). "Waterfalling" was thus, in fact, a collaborative endeavour from the inception of AQHEd-SL but rather in a "mentor-mentee relationship" or – as some of the focus group members put it – a "father-son relationship" with NU as the senior partner and MMCET as the junior partner (F10).

2.3.1 Output Level

The programme under review at NU was a **BSc in Agriculture (General);** the one at MMCET was also a **BSc in Agriculture but with an Education** focus. The two programmes overlap, i.e. they share a significant number of modules, which are taken over from NU by MMCET, and some of them are even taught by NU staff at MMCET. Therefore, when these overlapping core modules were revised at NU, MMCET could simply take over the revised modules (F10). At NU, all of the 46 modules of the

BSc were selected for review. By the summer of 2021, the review of all of these was complete; 38 were already approved and rolled out; for 8, approval was pending, and the roll-out is scheduled for the academic year 2021/22, i.e. starting from October 2021. As outlined above, the revised core modules of NU's BSc in Agriculture were incorporated into the **BSc in Agriculture (Education)** at MMCET, while MMCET initiated its own separate revision process "only" for that part of the curriculum that was not identical to the one at NU. As a result, "only" 18 modules had to be revised and approved at MMCET itself. Like at NU, this approval is supposed to be completed by September 2021, with rollout also scheduled to start from October 2021.

Content-wise, CR implied new and updated modules with a strong practice component such as Supervised Agricultural Practice (SAP), Agrobusiness (F12) and Entrepreneurship (F12, F13), but also modules on research methodology (F13) and strengthening of skill training for topics such as presenting and public speaking (F13). In addition, there was a complete reform of all assessment methods concerning both the assessment methods proper and the respective weighing procedures (F12, F13). Various stakeholders highlighted that one of the main goals of CR was to change the public image of agriculture. The image was supposed to be changed from the idea of a low-scale subsistence activity (as a career path for only those who have no other) to a viable form of (agro-) business with significant economic potential for both the individual farmer as well as for SL as a whole (F10, F12).

With regard to **stakeholder engagement,** academic staff from both NU and MMCET agreed that the overhaul of the programmes was based on a needs-based curriculum review strongly informed by stakeholder input and by the students themselves (F10, F13). Table 13 illustrates that stakeholder participation in the Agriculture Cluster was particularly broad and varied both in terms of the number of non-academic actors and in terms of the sectors covered (41 unique individuals from 18 different organisations + students). In their role as employers, stakeholders identified the weak points in the existing curricula, and they themselves concluded that AQHEd-SL resulted in a truly comprehensive review, whereas past reforms had been "piecemeal at best" (F10). In particular, the Ministry of Agriculture was very active and emphasised skills development and the involvement of private (agro-business) actors. As in other Clusters, SE did not stay limited to curriculum review. There were guest lectures (very popular with students; F12, F13), exchange programmes were initiated (mostly with agro-business; F12), and a series of MoUs came into existence (F12).

Cluster	Public	Private	3rd Sector
Agriculture	• Ministry of Agriculture Forestry and Food Security (MAFFS) • National Minerals Agency (NMA) • Sierra Leone Agricultural Research Institute (SLARI) • Sierra Leone Chamber for Agribusiness Development (SLeCAD) • UN Food and Agriculture Organizaton (FAO)	• Enterprise Development Services Ltd. • Kabia Farm • National Federation of Farmers Sierra Leone (NaFFSL) • Mountain Lion Agriculture • Sam-King Group of Companies	• Action Against Hunger (ACF) • BRAC • Conservation Society Sierra Leone • GIZ • SABI Sierra Leone • Sierra Leone Muslim Women in Agriculture • Students • Welt Hunger Hilfe (WHH) • World Vision

Table 13: Stakeholder Engagement in the Agriculture Cluster

2.3.2 Outcome Level

While the overlap in the BSc agriculture programmes at NU and MMCET resulted in a lower absolute number of modules undergoing **curriculum review** over the course of AQHEd-SL, it is still is fair to conclude that the respective programmes underwent a fundamental overhaul at both NU and MMCET. The most significant change is in the direction of practice orientation and, in particular, the introduction of (agro-) business perspective – an element that was almost completely lacking before the CR process. This is particularly significant given the high potential that modern, sustainable agriculture can have as an economic sector for the further development of Sierra Leone (F12).

With regard to **stakeholder engagement**, the number of non-academic actors participating in SE in the Agriculture Cluster is particularly high. Equally noteworthy is the spread across the three sectors. While SE connections did exist before between the HEIs and various non-academic actors, it was mentioned more than once in the focus group discussion that AQHEd-SL brought this cooperation to a "new level" (F10, F12). The enhanced interface to agro-business is particularly noteworthy given the considerations above.

The AQHEd-SL process also had consequences for the **relationship between NU and MMCET**. To be sure, the close collaboration did exist before, not least, because teaching staff from both institutions is active at NU's School of Agriculture; courses across the two HEIs are identical in part, etc. Nevertheless, AQHEd-SL has strengthened the relationship and improved collaboration and communication and has significantly reduced the asymmetries inherent in a "mentor-mentee relationship" (F10).

> ***"Every father is proud when his son surpasses him."***
> *NU Representative, F10*
>
> ***"I would not say we have surpassed them, but we are now real partners."***
> *MMCET Representative, F10*

2.3.3 Impact Level

Curriculum Review in the Agriculture Cluster was comprehensive and is locked in by now. It will only be possible to evaluate its true impact, however, once the first cohorts of graduates who went through the revised programmes hit the labour market in 2-3 years (F12). Still, it appears rather significant how strongly students emphasised that they feel better prepared for the labour market and how many of them displayed truly entrepreneurial spirit in the field of agriculture, mentioning time and again that they are looking forward to starting up their own businesses or participating in already established agro-businesses (F13).

> ***"We can be job creators, not job seekers."***
> *Student Representative, F13*

Concerning lateral spread, it is not clear to which extent AQHEd-SL's approaches have reached the state of diffusion at NU and MMCET. It is remarkable, however, that the two HEIs see the two revised programmes as elements of a standardised agriculture curriculum that they want to spread to other HEIs in SL. While sending lecturers to teach some courses at other HEIs was a plan that had existed before, spreading a complete (revised) curriculum would not have been possible without AQHEd-SL (F10). It is important to note that the idea of "lateral spread" here takes on a different

meaning. It was originally supposed to denote the spread of reform from a department/faculty participating in AQHEd-SL to other departments/faculties in the same HEI. The Agriculture Cluster makes it clear that "lateral spread" can also mean the spread of a particular programme *across* different HEIs. This was not intended or planned by AQHEd-SL but is certainly a welcome effect that can go a long way to strengthen its long-term impact (particularly given the significance of agriculture as an economic sector).

Finally, the number and variety of MoUs (F10, F12) allow for the conclusion that SE is also firmly locked-in in the Agriculture Cluster.

2.3.4 Lessons Learned

Critical considerations concerning the CR/SE process in Agriculture focused mostly on three issues:

1. Project communication: Employers claimed they could have been better informed about the entire process and context of AQHEd-SL (F12); both employers and students criticised that the final curriculum was not shared (yet?) and that it was thus difficult to judge whether and to which extent their suggestions had been considered (F12, F13).
2. It was noted (as in other Clusters) that **resources and physical teaching tools** are a bottleneck for practice-oriented teaching that can partly be offset by collaboration with practice institutions but not completely.
3. It was considered a weakness of the SPHEIR design that there was no direct link to **research**, which was considered essential to increase the level of teaching. Closer collaboration with agricultural research institutions might have gone a long way to remedy this problem (F12).

Suggestions for the future were varied and manifold:

1. The parts CR where topics overlap could be done across departments (e.g. the business aspects in agriculture).
2. A whole programme on agro-business (with only some elements of the agriculture curriculum and a strong business focus) would fill a gap and find its market (F12) (NB: While this argument was made by stakeholders, such a programme actually already exists at NU).
3. The practice orientation of the curriculum could be pushed further still (F13): There should be more student farms; HEIs should support students in acquiring land; dissertations should be as practice-oriented as the rest of the (revised) curriculum.
4. The HEIs' alumni networks could be leveraged for SE (internships, guest lecturers; F10).
5. Modules could be co-taught by HEIs and agrobusiness firms to create a permanent feedback loop in terms of "demands" and "needs" (for continuous CR; F12).

2.4 CR/SE in the Management Cluster

Type	Institution	Programme under Review in AQHEd-SL
Anchor	University of Makeni (UniMak)	BSc in Accounting & Finance
Waterfalling	Freetown Teacher's College (FTC)	Higher Teachers Certificate (HTC) in Business Studies
Observers	Njala University (NU), Ernest Bai Koroma U of Sc. and Technology (EBKUST), Eastern Polytechnic (EP), Milton Margai College of Education and Tech. (MMCET), Institute of Public Administration and Management (USL-IPAM)	

Table 14: The Management Cluster

The original title of this fourth Cluster was "Economics and Business", which was eventually narrowed down to "Management". The Cluster is made up of members of the Department of Accounting and Banking at the University of Makeni (UniMak) – which serves as anchor institution – and academics from Freetown Teacher's College (FTC) – which serves as waterfalling institution for the Management field. Academic staff from Njala University (NU), Ernest Bai Koroma University of Sc. and Technology (EBKUST), Eastern Polytechnic (EP), Milton Margai College of Education and Tech. (MMCET) are observers. A special feature of the Management Cluster is the additional observer role of the Institute of Public Administration and Management (USL-IPAM). In addition to FBC and COMAHS, IPAM constitutes the third major sub-unit of USL and it was mainly involved as observer in the Management Cluster. Its involvement did not rise to the level of making it a general stakeholder in AQHed-SL.

2.4.1 Output Level

UniMak's **BSc in Accounting and Finance** has 50 modules, all of which were selected for review. By the summer of 2021, all of these had been reviewed and approved, and were in the process of roll-out. FTC originally selected a BSc in Business Administration for review. This was a risky choice because it assumed that FTC would be merged with the Government Technical Institute (GTI) in time for the review. This plan had existed a long time before AQHEd-SL and would have given the merged institution as "Freetown Polytechnic" the right to run undergraduate programmes and award Bachelor's degrees.

However, the merger did not happen in time for the review (and it has still not happened as of the summer of 2021). FTC thus decided in early 2020 (AQHEd-SL quarter Q13) to revert to a **Higher Teachers Certificate (HTC) in Business Studies** for the purposes of CR/SE, which was a part of the pre-existing portfolio. However, this was not an easy choice to make. HTC degrees fall under the purview of the National Council for Technical Vocational and other Academic Awards (NCTVA) rather than the purview of the TEC (an established and active AQHEd-SL partner institution). The NCTVA, in turn, follows the rules of the West African Senior School Certificate Examination (WASSCE). This limited the range of changes that FTC could make to the respective curriculum without creating significant additional coordination needs (and thus probably delays). As a result, only nine modules of the HTC in Business Studies were selected for review, and again, all of them had been reviewed and approved

and were in the process of roll-out in September 2021. While this number is significantly lower than in the other AQHEd-SL institutions, it has to be considered that FTC did, in fact, find itself in a significantly more challenging strategic environment and with only limited control over its programmes.

> ***"SPHEIR has been a chance to develop a clear idea of what is needed and align the curricula producing the graduates that the country needs."***
> *UniMak Representative, F16*

Lecturers and students alike felt that prior to CR, many aspects of the curricula in Accounting, Finance and Business studies were "archaic" and/or marked by a "huge gap" between theory and practice (F09, F14). Rather telling is an example from UniMak, where for many years, the subject of finance studies was the tax system of the UK rather than the one of Sierra Leone (F14). One important aspect of CR was thus a comprehensive localisation of course content focused on current and future needs of the respective sectors in SL as well as on international standards (e.g. in accounting; F09, F14). This also implied – among other things – an emphasis on a large range of key skills such as presentation skills, IT skills (including training on accounting software actually used by employers), teamwork, effective communication at the workplace (including report writing), as well as professional ethics (F09).

> ***"Apart from the meeting, the lecturers also visited us to work on the update of the accounting syllabus. I was able to provide input and give insights into what the market needs. I also advised on how to improve the internship experience."***
> *Employer Representative, F11*

Stakeholder Engagement in the case of the Management Cluster was comprehensive and involved a large range of actors from various fields (68 unique individuals from 33 organisations and various students; see table 15). Less surprising are the private actors (as potential employers of graduates); more surprising is the large range of public actors – many of which are also interested in graduates from the selected programmes (NCTVA participation was the logical consequence of FTC's choice of an HTC programme; see above). Noteworthy is the development and distribution of an employer questionnaire, but ultimately it was a series of personal meetings that was considered to have been of "immense value" (F09, F11). SE was not limited to issues of CR. Other forms of cooperation were developed, among which guest lectures were considered particularly worthwhile for both guests and the students (F11, F14). Noteworthy is also the development of an "Employers' Fair" at UniMak (F14).

> ***"I gave a guest lecture on risk, and fraud, and what it is like to be an auditor. It was very exciting. There were 80 students, and my lecture was followed by a vivid discussion with many questions from the students. This was a great experience for me. We would like to see more involvement."***
> *Employer Representative, F11*

Cluster	Public	Private	3rd Sector
Management	• Huntingdon Secondary School, Jui • Makeni City Council • Ministry of Agriculture and Forestry • Ministry of Finance • Ministry of Health and Sanitation • National Commission for Social Action (NaCSA) • National Revenue Authority (NRA) • National Social Security and Insurance Trust (NASSIT) • Public Service Commission • School of Excellency, Waterloo	• A Call to Business • Amzas Radio • Baker Tilly (formerly KPMG Sierra Leone) • Ecobank • Institute of Chartered Accountants (ICASL) • Life By Design • MTA Associates • Orange SL • Sierra Leone Association of Commercial Banks • SL Association of Microfinance Institutions • SL Commercial Bank (SLCB) • UBA Bank • Vero's Inez Beauty Enterprise	• Amzas Radio • Hope Radio • Radio Maria • Students • Women's Forum for Human Rights and Democracy (WOFHRAD)

Table 15: Stakeholder Engagement in the Management Cluster

2.4.2 Outcome Level

The **curriculum review** changed both programmes under review in the management Cluster significantly. Changes were more sweeping in the case of UniMak, which was due to UniMak's higher degree of flexibility because of its status as a private HEI (I05). This was reinforced by the fact that FTC had to choose an HTC for reasons beyond its control, which, in turn, limited the range of potential changes. However, the *direction* of change at both institutions was similar: A much stronger focus on practice orientation and key skills that directly increased the employability of graduates.

The direction of change is the direct consequence of extensive and intensive **stakeholder engagement**. Stakeholder recommendations on desired competences of graduates were considered of central importance to CR, and most of these recommendations were implemented (F09). However, the change did not come easy. The first meetings and the rather open criticism by many employers came as a shock to some of the lecturers, but after a "6-months denial phase", this openness became a "motor of change" that eventually led to a "mindset change" (F09). Eventually, academics opened up to feedback from practitioners, and a community between academics and practitioners emerged that hitherto had not existed (F09, F11). It is remarkable that *all* stakeholder groups (academics, employers and students alike) talked about the immense value of the resulting network between academic and practice and the "life-changing experience" of collaboration (F09, F11, F14)

> ***"The lecturers I met were prepared to listen, but initially, they were completely out of sync with industry."***
> *Employer Representative, F11*

The collaboration on CR and SE has also brought UniMak and FTC significantly closer together (F09) – although it is difficult to gauge the precise extent.

2.4.3 Impact Level

Since all the modules under review in the Management Cluster have been approved and are in the process of rollout, it is fair to conclude that there is a lock-in in CR. It should also be noted that students displayed a very high level of confidence in their increased employability as well as the significant new opportunities awarded to them by the various networking options that became available in the context of the comprehensive SE initiatives (F14). For them, AQHEd-SL clearly has already made a tangible difference.

Concerning SE proper, it was claimed that AQHEd-SL has been able to "build a bridge" between HEI and stakeholders, narrowing the pre-existing gap (F09). While there is not a large number of MoUs so far, it appears that there is general acknowledgement that (a) mutual exchange is highly beneficial to both sides (F09, F11, F14) and (b) that practice in the business world is continuing to move and moving fast (F09, F11). It thus appears highly likely that SE will be continued as a result of the "mindset change" mentioned above (F16).

Particularly noteworthy in terms of lateral spread are the plans at UniMak. Under their "sustainability plan" (the existence of which is remarkable in its own right; see section 2.8.1), CR will be replicated for the other departments in management and commerce (using AQHEd-SL methods and templates), and eventually, the model and the lessons learnt are to be cascaded to other faculties (F16). For FTC, the situation is significantly more complicated given the constraints outlined above. The question of whether or not the upgrade to "Freetown Polytechnic" will come will ultimately determine FTC's ability to apply the model to undergraduate degrees. However, according to FTC representatives, it is not out of the question that FTC might apply a logic similar to the one by EP. In other words: Comprehensive CR (following the AQHEd-SL approach) could be used to leverage the status upgrade of the HEI (F09). There are limits to this, however, given that the merger with GTI is not in control of FTC.

2.4.4 Lessons Learned

Critical considerations concerning the CR/SE process in the Management Cluster focused mostly on two issues:

1. Project communication (again). Employers claimed that the final curriculum was not shared (yet?) and that it was thus difficult to judge whether and to which extent their suggestions had been considered (F11).
2. While the localisation of modules content was a significant achievement of CR, there is a lack of equally localised textbooks.

Suggestions for the future came mostly from the side of the employers:

1. For projects of the scale and scope of AQHEd-SL, the full buy-in and endorsement of HEI leadership are decisive (F09).
2. Since employers are to a certain degree dependent on tomorrow's graduates, it would be meaningful for them to support HEIs (even financially; F11).

3. SE can evolve into new forms and directions, including common mentoring and the collaboration on theses and dissertations (with topics chosen from "real-life problems"; F11).
4. MoUs can stabilise SE, but "Industry Advisory Boards" might be another tool to make the link between HEIs and practitioners more stable (F11).
5. Since the business world is constantly changing and shifting, CR in this field should be a continuous, cyclical process. (F11).

2.5 Quality Assurance

2.5.1 Output Level

Important for understanding AQHEd-SL's work in QA is the difference between external and internal QA (EQA/IQA). "External" and "internal" are to be understood relative to the HEIs, i.e. external QA is chiefly coordinated and supervised by the Tertiary Education Commission (TEC) based on national QA standards as well as – eventually – a National Qualification Framework (NQF; full name: "National Qualification Framework for Tertiary Education in Sierra Leone, NQFTESL"). Internal Quality Assurance (IQA), on the other hand, refers to QA work done on the level of the HEIs by the HEIs themselves.

The original grant proposal saw the development and approval of an NQF for tertiary education as one of the cornerstones for the long-term impact of AQHEd-SL in the field of **External Quality Assurance (EQA)**. However, because of challenges in the first phases of the project, **NQF development** was put on hold in 2019. After AQHEd-SL improved considerably over the course of 2019 and 2020, towards the end of 2020, members of PMB/PCU wanted to bring the development of the NQF back as part of the project's work in EQA. They saw the NQF as a culmination point of AQHEd-SL, a highly significant achievement with long-term consequences that should not be missing from the output of AQHEd-SL (I04). Interestingly enough, there was hesitancy on the side of the SPHEIR programme manager, and it was only after the development of the NQF was submitted as a proposal that the green light was eventually given (I04, I05). Subsequently, the NQF was drafted by a task force composed of experts from USL, SLIE and NU who serve on the PMB/PCU, in addition to representatives from the TEC, UniMak, and the 50/50 group – fully in Sierra Leonean ownership and without the assistance of external consultants (this is a noteworthy difference when compared, e.g. to the development of the TVET-NQF that was funded by GIZ and chiefly developed by external consultants).

> ***"The NQF is the icing on the cake"***
> *PMB Representative, I05*

Based on extensive benchmarking with other national and international QA Frameworks (e.g. West African Qualifications Framework, the African Continental Qualifications Framework, North African Qualifications Framework, and the South African Qualifications Framework, the draft of the NQF was finished in the summer of 2021 (I04). It was presented to the TEC and in September 2021, a two-day stakeholders validation workshop was held, which was launched by the Minister for Technical and Higher Education. Now, the process will be taken over by the TEC. Eventually, there will have to be an act of parliament, which, however, will have a formal function only, while actual implementation of the NQF by the TEC can start beforehand (I04). Given that there is a complete draft, it seems likely that most of these steps can be concluded before the end of AQHEd-SL (the end of 2021).

No less significant in terms of EQA is the **role of the TEC**, in particular, coordinating and supporting AQHEd-SL in general and its work in QA in particular. Highly relevant are the endorsement of the templates and standards developed by AQHEd-SL (see below section 2.6) and the corresponding update of their internal checklists (F02); the pro-active role the TEC has played in the acceptance of the post-graduate diploma in QA and the employment of graduates of the first cohorts (see in this section below).

AQHEd-SL's work in **Internal Quality Assurance** consisted of (a) the workshop-based development of templates and standards for QA (see section 2.6 below), (b) QA-training proper (based on the above templates), and – rather significant – (c) the development and implementation of a **post-graduate Diploma in QA** (the first of its kind in Sierra Leone). The QA-Diploma curriculum was developed very early during the lifetime of AQHEd-SL in just six months between April 2018 and the fall of the same year. The fundamental idea, as well as some of the content of the programme, were inspired by a DAAD-funded QA workshop at the University of Duisburg-Essen in 2014, in which members of the PMB participated before the AQHEd-SL proposal was written. In fact, they used the proposal to apply their ideas about QA to the Sierra Leonean context (I02). Other parts built on material developed by the East African Quality Assurance Network (I02). Still, despite these pre-existing ideas, the swift development of the programme is noteworthy and is considered by some stakeholders a "tremendous achievement" (I02). The QA-Diploma is a one-year (two-semester programme) with a total of 15 credit hours (CHrs; see table 16). It should be noted that there are synergetic effects between the AQHEd-SL activities training (see section 2.7) and the diploma because the gender perspective and critical thinking (two core topics of the trainings) are now considered a part of QA in all participating HEIs (F01).

1st Semester	
Introduction to QA in HEIs	3 CHrs
Theory and Concept of Evaluation	3 CHrs
Academic QA, Study Programme and Curriculum	3 CHrs
2nd Semester	
Information Management in QA	3 CHrs
Quality Management in HEIs	3 CHrs

Table 16: Structure of the Postgraduate Diploma in QA

Because of the swift development of the programme and its curriculum, the first cohort of students could already start their training in the fall of 2018 and complete it in the fall of 2019. Within the lifetime of AQHEd-SL, three full cohorts will be trained and graduate (18 students from cohorts 1 and 2 have already graduated; 16 individuals are trained as part of the third cohort). While the acceptance of the AQHEd-SL's QA work in general and of the diploma in particular was high (I02), there were problems with the implementation because of a (politically induced) change of university leadership at NU (where the diploma was supposed to be accredited). Because of the ensuing delays, the first cohort could not graduate as planned but graduated together with the second cohort officially in the fall of 2020 (official ceremony in spring 2021) after the issue of accreditation had been solved

by UniMak officially taking over the role as an accrediting university. As a private institution, the corresponding intra-university processes were significantly less involved (I02).

There was a prior agreement that TEC and the participating HEIs would send some of their officers/staff members to participate in the diploma programme (which they did parallel to working for the TEC or their home institutions). Subsequently, graduates started formally working as QA Officers back at their institutions.

It should be highlighted, though, that within the lifetime of AQHEd-SL, *all* participating HEIs set up QA offices and staffed them in this manner. This illustrates the very strong endorsement that IQA received by all participating HEIs (F01) – even if some saw it as a "bold step" (F10). Please note: Such a deep acceptance of IQA by HEIs is not self-evident. In many contexts, HEIs are reluctant to accept QA institutions and processes for fear of having weaknesses exposed. In the context of Sierra Leone, however, with various structural problems of the HE sector obvious, QA is seen as a tool of problem-solving rather than a danger for institutional reputation (I03).

2.5.2 Outcome Level

The consequences of the **External Quality Assurance** activities concern the TEC primarily. For the NQF, it is too early for the effects to become directly traceable. However, among other things, the NQF will align the credit system with international standards and set the basis for increased mobility of both lecturers and students. Many stakeholders expected powerful positive knock-on effects from this for the quality of HE in SL (I04, F16, F09). One challenge that remains is the issue of an NQF for TVET that was developed in parallel (but unconnected to the AQHEd process) with support from the GIZ. Stakeholders disagreed to which extent the two documents would have to be merged (I07 versus I05). If, however, the AQHEd-SL NQF for HE is built in a modular manner, it would allow for the integration of the TVET document.

AQHEd-SL's EQA activities had powerful effects on the role and the standing of the **Tertiary Education Commission (TEC)**. For the original proposal, it was noted by reviewers that to have a regulatory body on the project consortium had enormous potential for the long-term impact of the project (a significant advantage for a proposal that is bidding for a programme geared at "transformational change"). This assumption was not wrong. The TEC did, contribute significantly to AQHED-SL in terms of co-developing, accepting (and thus universalising) standards defined in the context of AQHEd-SL – not least in QA. However, few people would have probably anticipated how much the TEC itself has gained from the AQHEd-SL process. It is clearly visible the TEC's mission has become more clearly specified, TEC is better staffed (and the staff better trained), and the TEC has, in fact, become the central clearinghouse in matters concerning QA across Sierra Leone (I05, F01, F02).

> ***"The TEC is more confident now – and they have reason to be."***
> *PMB Representative, I05*

Strictly speaking, the **QA diploma** sits "between" EQA and IQA in that it trains both HEI-level and TEC-level QA staff. This, however, is one of its biggest strengths. The QA diploma has set a clearly defined standard for QA across Sierra Leone, and it has trained an entire generation of QA officers who "speak the same language and share the same concepts and ideas" (F01) on the level of the TEC and the HEIs alike. The project has thus

> ***"We all speak the same language now: Quality!"***
> *QA Representative, F01*

served as a catalyst for the formation of a "**community of QA officers**" with a high degree of entrepreneurial energy (F01, F02, I02). The coherence of this "AQHEd-SL-generation" of QA officers is so strong that there are plans to form a professional organisation, a "Sierra Leonean Quality Assurance Association" (F01, F02) – a plan that is strongly supported by the TEC (F01). The ambition is to ensure the sustainability of SPHEIR results at HEI and national level and to integrate secondary education and TVET as well as form a link to international networks (e.g. AfriQAN African Quality Assurance Network). Work on the constitution of this association is already underway (F01, F02). This coherence is a tremendous advantage in terms of harmonising ideas of QA across the entire HE system and in terms of facilitating the relations between the TEC and the HEIs on the one hand and among the HEIs on the other hand. The TEC has stated that it sees the IQA officers at the HEIs as its "entry points" (F01, F02).

The consequences of the institutionalisation of **Internal Quality Assurance** on the level of the HEIs have already tangible consequences for students and lecturers alike. Examples include direct evaluation of lecturers, clear definition and enforcement of examination rules, better communication of grades, better communication of assignment rules and grading, more consistent communication of and adherence to the academic calendar etc (F14). In many cases, evaluation results are individually discussed with lecturers by the respective QA offices (I01). Significantly improved is also the data collection for the purposes of QA (which hitherto was not common) (F01). Overall, students expressed that QA has led to a much more "responsive" and "open" study environment where they always find an "open door" to settle the issues that they might have. (F08, F13, F14). Significant is the changing image of QA – away from an audit function (where the QA officer is seen as a "watchdog" or "policeman") – and rather towards the role of a "facilitator" for problem-solving based on an "open-door policy" (F01). In some cases, there have even been knock-on effects of QA on the strategic development plans of the respective HEI (e.g. at NU, F01).

2.5.3 Impact Level

Two of the three core high-level goals of SPHEIR are (a) Improved overall quality of the HE sector and (b) Systemic reforms and strengthened regulatory framework for HE. There can be little doubt that AQHEd-SL's work in QA has significantly contributed to this. It was achieved primarily by:

- Defining a harmonised QA framework, including the NQF.
- Developing a post-graduate diploma and
- Educating a significant cohort of professionals accordingly.
- Forming them into a coherent cohort with a common professional identity.
- Positioning these professionals at HEIs and TEC.
- Strengthening and upgrading the role of the TEC itself.

It should be noted that QA is, in itself, a tool for the lock-in of change and reform – especially if IQA and EQA are coherent (I02). However, while with the NQF, the QA templates, the diploma, potentially the professional association, the institutionalisation of HEI QA offices, and the "upgrade" of the TEC, a **rather remarkable degree of institutional lock-in** has already been achieved for QA, some concerns with regard to sustainability do remain. This concerns primarily:

- The future of the QA offices and officers (Is funding secured in the long-term?).
- The future of the Diploma programme.

With regard to the second issue, the Senate and Council of UniMak have already endorsed the PG diploma in QA as a permanent official UniMak programme (F16). There are also considerations whether to upgrade the programme to a bachelor/master/PhD-level (as there are few people in the country who can teach QA), and a collaboration with Ghana is being considered (I07). Funding, however, will remain an issue for QA education as well. Worth mentioning is also the work done at USL on quality management training (albeit more geared towards industry). It will be important for the legacy of AQHEd's work to maintain the coherence achieved with the diploma.

2.5.4 Lessons Learned

The field interviews brought very little to light with regard to criticism about the QA process. In fact, stakeholders were consistently positive about AQHEd-SL's QA activities. It was mentioned, however, that it was important to bring back the NQF as a key element in transformational change and that it should not have been so difficult to bring it back. In particular, it should not have been necessary to give it the form of a proposal in an already existing grant of which it was already a part (I02).

Stakeholders did have a number of considerations about the conditions that made the success in QA possible (see also section 2.1.4). Most prominent among them were:

- The 2014 QA workshop in Duisburg-Essen has sown the seeds for QA in AQHEd-SL. It only did so, however, because the "right" attendees became political entrepreneurs in the context of SL and SPHEIR. They saw the potential and acted upon it.
- AQHEd-SL successfully leveraged the institutional interest of TEC (to become more relevant, better staffed, more visible, more informally recognised across SL). This might not have been fully intended, but it *has* worked to the great advantage of the entire QA field and AQHEd-SL as a whole.
- The fact that the NQF was fully developed in SL (without the involvement of international consultants) has significantly increased ownership by the actors involved. (The same pattern became visible when Covid-19 made the participation of Internationals in trainings in SL more complicated; see section 2.7 below): In general, **the higher the SL participation and the more responsible the respective role, the greater the capacity development effects and the deeper the ownership (cf. logic of "rising to the task").**

One interesting idea about the future of QA concerned secondary education. It was argued that this sector could enormously benefit as well and that this, in turn, would have positive knock-on effects on the students entering HEIs (compare the considerations about STEM education in section 2.1.4 and health education in section 2.2.4)

2.6 Templates and Standardisation

2.6.1 Output Level

True to the original plan, AQHEd-SL has produced a series of **standardised documents and templates**; distributed as "manuals". They were closely associated with the trainings (see section 2.7) below – in that they either benefitted from the input of workshop discussions or in that they informed further workshops and trainings. For each of them, there was a "writing group" formed (with the approval of the PMB/PCU) that drafted the respective manual. Eventually, project management, TEC and QA officers (see section 2.5) got together and finalised the respective document. Subsequently, there was a validation by the Clusters and eventually a formal endorsement by the TEC. The respective documents were then distributed to the HEIs, and their content informed subsequent AQHEd-SL training workshops. Over the course of AQHEd-SL, four of these standardisation documents were developed:

1. Curriculum Review Manual Vol. 1 ("Overview of Curriculum Review Process and Curriculum Review Templates")
2. Curriculum Review Manual Vol. 2 ("Analysis of Curriculum Mapping Data")
3. Quality Assurance Manual
4. Pedagogy Manual

The work on these manuals started early in the project, with the CR manuals going first. It had become apparent in early discussions that CR could only proceed in a meaningful manner if it would not lead to idiosyncratic and incoherent results across the different Clusters and HEIs. Moreover, it was an early strategic consideration that these documents were also important tools in spreading reform approaches within universities across different departments ("lateral spread") and that they might continue to inform HE reform well beyond the lifetime of AQHEd-SL (I05). The CR Manuals were drafted by September 2019 and validated in a Cluster meeting by January 2020. The QA Manual was also drafted still in 2019, but its validation took until 2021 (I03). The Pedagogy Manual was finished in 2021. It should be noted that this last manual was not originally planned and came into being as a result of UIUC assembling accompanying guides to the videos that were recorded (as a substitute to the on-site workshops that became impossible because of the pandemic). Turning these guides into a "Manual" became a "low hanging fruit" (I03).

2.6.2 Outcome Level

The can be no doubt that the manuals and templates and the entire effort at standardisation have had a **profound effect on the work in the AQHEd Clusters**. This is already indicated by the multiple previous references to the templates in the sections above. The CR Manuals have indeed guided CR in the Clusters, the QA Manual is a core document for the work of the QA officers in HEIs and TEC alike, and the pedagogy manual was an important document for the pedagogy trainings as well as similar events at the HEIs. What is much more difficult to gauge is **lateral spread**. There clearly are positive indications. Most notable among those are:

- The endorsement of the manuals by the TEC (F01, F02) will make the HEI use them "– eventually" (I02).
- The endorsement of the manuals by the HEIs (albeit not all manuals at all HEIs and not with the same level of commitment).
- The already existing indications of use of the manuals in various non-AQHEd-SL programmes, such as:

    - The universal use of the templates at EP in their (successful) bid to graduate to university status (see section 2.1.3). For this process, the manuals were considered "key stepping stones" (F01, F02, F04).
    - The plans at MMCET to replicate the process at EP (with the same strategic idea); a plan that has already started being implemented with the revision of the programme in Tourism and Hospitality (F10).
    - The plans at UniMak to use the templates across programmes first within management and commerce and eventually in other departments as well (see section 2.4.3).
    - NU has already started to use the templates in cascading reform to all schools of the university with the support of the TEC (F10).
    - The use of the templates in the nursing programme at COMAHS and potentially even in the medical sciences (see section 2.2.3; I01).

> ***"I have revised my modules using the templates. In my school, we are also thinking of cascading this process, especially with the course information template"***
> *Agriculture Cluster Member, F10*

However, it is also true that at some HEIs (such as EBKUST), there is resistance to the use of the manuals, especially in the case of politically induced changes in HEI leadership. Moreover, even *if* a HE has officially accepted the templates, universal lateral spread is neither the obvious nor the immediate consequence (e.g. at USL, with its pro-active and entrepreneurial engineering department and the official endorsement on the level of the university, the renowned faculty of law is so far completely untouched by any these developments; I07).

2.6.3 Impact Level

> ***"SPHEIR has left a legacy – the particular templates that have been developed, the manual, which will be with us for a very long time."***
> *QA Representative, F01*

Probably the most significant step for the long-term impact of the manuals is the endorsement by the TEC and the internal adaptation of TEC checklists on the basis of the manuals (F02). Stakeholders agreed that this endorsement means that the manuals will not "go away again" and that eventually, "sooner or later" HEIs will make use of them (F02, I02). What can be observed already is a significant (albeit far from complete) lateral spread. It should be noted, however, that given the fact that these manuals were developed only two years ago and some were only completed this year, it is difficult to imagine a faster process. In this sense, there is good reason to argue that with regard to lateral spread, the glass is "a quarter full" rather than "three-quarters empty" (I02, I04, I05).

It can thus be concluded that the AQHEd-SL workstream on templates and standardisation did contribute to all three overarching, long-term SPHEIR goals. It was a significant contribution to CR in

the Clusters and thus a prerequisite to improving graduate qualification and employability. There are good chances that eventually, this process will get a broader footing by lateral spread. In addition, this workstream helped the overall quality of the HE sector and contributed to systemic reforms – particularly via the TEC and HEI leadership.

2.6.4 Lessons Learned

Stakeholders did not report much criticism concerning the manuals and templates workstream. They did voice concerns/ideas, however, about (1) future revisions of the manuals and (2) lateral spread:

1. The TEC was considered the logical “torchbearer” for further development and for continuous revisions of the manuals and templates after the end of AQHEd-SL. It was noted, however, that that might be a significant additional task given the topical breadth of the manuals beyond QA (I07). Actual work, on the other hand, might not have to be done by the TEC alone but could be delegated to a single HEI with the TEC supervising the process or, alternatively, to a committee of HEI representatives that could be linked, e.g. to the Conference of Vice-Chancellors and Principles (CVCP) (I02).
2. There was general agreement that lateral spread of the manuals and templates was key to achieve long-term effects for the HE sector (F03, F04, F10, F09, I04). One way to ease lateral spread is to leverage the *institutional interest* of an entire HEI (like in the case of EP and MMCET). Another way, however, is to leverage the *individual interest* of faculty members and their “competitive instincts” in terms of capacity building. Thus, AQHEd-SL Cluster team members as "internal stakeholders" are key in spreading the ideas at their “home HEIs” and they should be “trained as trainers” accordingly (I04).

2.7 Training

2.7.1 Output Level

Members of all AQHEd stakeholder groups have participated in a series of workshops on cross-cutting topics associated with the various workstreams of the project. Table 17 summarises the respective topics and illustrates the scope of training by giving the total number of participants for each topic (combining the participants across all the iterations the workshop was held).

The trainings were supported by international AQHEd-SL consortium members such as the University of Illinois Urbana-Champaign (UIUC) and the International Network for the Availability of Scientific Publications (INASP), as well as the Sierra Leonean 50/50 Group. Workshop-based trainings started early in the training and continued throughout the lifetime of the project. In the later stages of the project, workshops shifted to the "train the trainers"-approach to maximise the potential impact and leverage multiplier effects, especially on the level of the AQHEd-SL HEIs (I03). Workshops were high-intensity and typically lasted multiple days (in the case of "quality assurance", the workshop ran for one week each). The workshops systematically linked to the AQHEd-SL CR-, and QA workstreams;

they were considered a part of the processes with intended effects of their own outside and beyond the other workstreams.

Workshop Topic	Supported by	Total # of participants
Pedagogy 1.0	UIUC	97
Pedagogy 2.0	UIUC	87
Pedagogy 3.0	UIUC	109
Critical Thinking	INASP	186
Gender, Diversity, and Inclusion	50/50 Group	132
Quality Assurance	TEC/USL/Consultant	34

Table 17: AQHEd-SL Training Workshops

From March 2020 on, the inability of some partners to travel internationally (because of the Covid-19 pandemic) affected some trainings, including the pedagogy workshop of UIUC and the critical thinking training of INASP. The AQHED-SL project team worked with the partners to localise the training and develop **asynchronous e-learning solutions** (e.g. pre-recorded and pedagogy handbook). Although these solutions had some drawbacks in terms of less interactivity, they allowed for sustainability as the material can be used to continue with the capacity building after the end of the project and will help trained staff to refresh their skills when needed – remotely supported by INASP, locally appointed "Critical Thinking Task Force Officers" contributed to the pedagogy training with sessions around lecture planning and learning assessment methods that help with developing students' critical thinking skills. The "train-the-trainer" approach really paid off: all subsequent trainings were run exclusively by in-country taskforces (I03).

The specific trainings on **Gender, Diversity, and Inclusion** followed the approach of "gender champions training", i.e. participants were supposed to become multipliers of the respective concepts and ideas at their home institutions. Topics included gender images and stereotypes, equity versus equality, understanding the gendered aspects of meritocracy, the contextualisation of HE in a (gendered) society, etc (I08). Covid-19 delayed some of these trainings as well (F09), and they were also switched to the "train the trainer" model (I08). It is important to emphasise that the topic was not only covered in specific workshops. Gender, diversity and inclusions were considered from the inception of AQHEd-SL as "transversal topics" that were integrated into (almost) all trainings (including QA!) and also in the standardised manuals AQHEd-SL produced – including the NQF (see section 2.6; I08). Among other things, standardised checklists for related items were produced for *all* of AQHEd-SL'S workstreams.

2.7.2 Outcome Level

It is hard to overstate the feedback by AQHEd-SL stakeholders to the trainings. Lecturers were united in their appraisal concerning the trainings as well as their impact. Terms like "game-changer", "eye-opener", "paradigm shift" were frequently used regarding pedagogy and critical thinking trainings and the general shift to "student-centred learning" (F03, F04, F09, F10). A specific "honourable mention" has to go to "Bloom's Taxonomy" – a specific model used to classify educational learning objectives introduced in the pedagogy trainings – in relation to which lecturers across all Clusters (!) used terms like "epiphany" (F03, F04, F09, F10).

> ***"SPHEIR has been key for my own capacity building. I learnt a lot about critical thinking. That has given me a lot of confidence, it has added a lot of skills to my own "toolkit". And I was able to look at my own HEIs from a different perspective. SPHEIR has opened my eyes to see what is lacking in my own institution."***
> *QA Representative, F01*

More specifically, staff from the **STEM Cluster** reported that the teaching style at the engineering department at FBC had changed after staff participation in the workshops and that pedagogical methods now regularly included discussions, group work, personal projects and a much higher level of interaction with instructors. Teaching methodology has become a regular part of all syllabi (F04).

> ***"Most of us have not received any teach training. SPHEIR has provided a scientific basis to review our pedagogy rather than a random approach based on personal preferences. This has provided us with a new paradigm"***
> *STEM Cluster Representative, F04*

Reports from the **Health Cluster** go in a very similar direction with the added information that now, all new lecturers at COMAHS are trained in these approaches by staff having undergone AQHEd "train-the-trainer" workshops and that a cascading to other departments is already planned (I01). Critical thinking has become a core element of curriculum/syllabi, as has the definition of learning objective, case study teaching, and the methods of the "flipped classroom" (F03).

> ***"This programme really was an eye-opener. Before, I had never heard about Bloom's Taxonomy. Now the students just took their first-semester exam. To formulate the questions for the exams, I just had to go to the course objectives"***
> *Health Cluster Representative, F03*

Lecturers from the **Agriculture Cluster** emphasised the use of group work and other teaching methods, changed assessment methods that have already increased class attendance and participation (F10).

> ***"SPHEIR has been able to give us a greater sense of meaning: service to students."***
> *Agriculture Custer Representative, F10*

Similar statements came from Lecturers in the **Management Cluster** from which there were also reports that UniMak has already started organising internal workshops sharing the knowledge from the workshops with members of other departments and faculties (another 42 participants in pedagogy training *at* UniMak; F09, I03).

> ***"It was mind-boggling that critical thinking was a subject never addressed in Sierra Leone before." – "It is more fun now!"***
> *Management Custer Representatives, F09*

What is rather significant is that these reports about fundamental changes to teaching style, pedagogy, and assessment methods were confirmed by **students from all Clusters**. This included the statement that changes had been felt at their respective universities *beyond* (!) the Courses in the Cluster programmes – a clear indicator of lateral spread (F07, F08, F13 – and rather strongly – F14).

> ***"Gender and inclusion were transversal themes in all of the pedagogy trainings. The training even covered the grading system, the gender-bias in terminology and student representation. And changes are already visible! For instance, we insist there should be a gender balance with our student representatives, we encourage female students to speak up in class and we have changed the way we talk, for instance using 'she/he' instead of just 'he'."***
> *Management Cluster Representative, F09*

> ***"In the beginning, training participants would try to justify why women did not need to be particularly considered. Offering counterarguments, sometimes you could actually see the penny drop."***
> *50/50 Group Representative, I09*

The 50/50 Group reported that the **Gender, Diversity, and Inclusion** trainings were met with initial resistance and claims of irrelevance. Some of this resistance, however, could be overcome once disaggregated data on the topic (the very collection of which was an issue) could be presented. Over time, however, AQHed-SL achieved integration of the gender theme across all work packages which resulted in it being present in all trainings and templates/manuals/handbooks – including the NQF (I08, F09). The conclusion was that AQHEd-SL did succeed in creating awareness but that the underlying issue will require a "cultural change" in the whole country that will take time and that will have to include political and legal action outside academia as well. At the same time, it should be mentioned that the very inclusion of the 50/50 group in the AQHEd-SL consortium is a significant step already as this was the first time the organisation was acknowledged by and could work with HEIs. This can be seen as a "door opener" for opportunities to do more with HEIs beyond the SPHEIR project (I08).

Initial resistance notwithstanding, effects of the gender, diversity, and inclusion trainings are traceable on the level of the individual Clusters as well. Faculty in the **STEM Cluster** claimed they now try to practice gender and sensitivity towards disabilities in all classes (F04), and (female) students confirmed that female students had become more "visible" at FBC (F08). In 2021 the first-ever female student president was elected at FBC (I08).

Faculty from the **Health Cluster** argued that the awareness of existing gender bias was raised significantly (I01), and at the same time, (female) students confirmed that gender sensitivity in class (and outside) was tangibly higher than before (in particular, female students were encouraged to present and participate; F07). In addition, on the faculty level, even the composition of some committees has started to change (I01).

In the **Agriculture Cluster**, lecturers admitted that the acceptance of gender and inclusion norms was a gradual process, and they pointed out that the problems started on the level of secondary education because of which a lower number of female students enrolled in the "hard sciences" (F10). (Female) students, however, reported that they felt that as a result of the trainings there were more opportunities for them (e.g. to become "visible", to be elected as class representatives, etc) and that they wanted to become role models for other women (F13). In addition, they said how inspired they were to learn about women in agriculture in guest lectures that faculty organised (F13).

In the **Management Cluster**, faculty reported that gender equality had hitherto been largely ignored and that they now understood that that was an important component of teaching as well as

campus life (F09). It was UniMak that was fast to take up the gender topic. This process demonstrated once more the higher flexibility of UniMak as a private institution as it resulted in the institutionalisation of a permanent "gender officer" (I08). (Female) Students confirmed the significant effect due to the existence of this office and also confirmed that they were actively encouraged in their studies by academic staff in various ways (F14).

2.7.3 Impact Level

The AQHEd-SL trainings were remarkably successful. They (a) played an important role in catalysing and facilitating the work in the other workstreams (e.g. CR and QA). Thus, to the extent that AQHEd-SL **improved graduate qualification and employability** (SPHEIR primary high-level goal) trainings were part and parcel of that process. At the same time, there are clear indications that (b) the trainings achieved a particularly high level of lateral spread – not least because the staff members who participated in them do not only teach in the programme undergoing CR in the context of AQHEd-SL, but they take the new pedagogical approaches "with them" as they work in other programmes, fields, and sometimes even faculties. At the same time, the pre-existing gaps and the benefits of the trainings are so tangible that there seems to be active "pull" from other departments to integrate such approaches.

The inability of international partners to travel and the corresponding attempts to find creative solutions for the affected workshops had two positive side effects: (1) Initially, the asynchronous e-learning solutions were considered to be not much more than Corona-necessitated second-best options to make something possible that otherwise would not be. But they turned out to be innovative approaches that were remarkably effective and efficient and resulted in high-level training material that will be available significantly beyond the lifespan of AQHEd-SL. (2) Workshops and trainings had to be completely localised and had to be focused on "train-the-trainer" approaches. This resulted in particularly high levels of ownership and context-sensitivity and strengthened capacity development. It thus formed an excellent base for lateral spread and sustainability (I03).

Taken together with the positive effects of the Gender, Diversity, and Inclusion training that in the evaluation could be triangulated across faculty and students, it is thus no overstatement to conclude that **the trainings improved the overall quality of the HE sector or at least laid the foundations for a self-reinforcing process in this direction**.

2.7.4 Lessons Learned

As outlined, stakeholders shared a generally very positive view of the AQHEd-SL trainings workstream. They mentioned, however, a number of interesting **success conditions**:

1. Issuing formal certificates for the trainings was very helpful as it provided a documented recognition that could be made visible at home universities (as some kind of formal "currency").
2. Somewhat ironically, the pandemic unlocked local potential and catalysed capacity development in the "train-the-trainer" formats. The localisation, in turn, had very positive effects on acceptance and effectiveness.
3. With gender mainstreaming often being perceived as a Western (and thus "alien") concept, working with a local organisation was very important because the argument was invalidated. This applied to the "message and messenger" (I08).

Considerations for the future of trainings included:

1. It is a widely held but flawed belief that a good researcher is automatically a good teacher. Since this is simply wrong, pedagogy trainings should be mandatory and a part of QA (F10).
2. **The positive effect of the localisation of the trainings suggests that in many cases, there is sufficient in-country experience to deliver a project (or an element thereof) (I02). The ideal role for external international partners is thus the role of a catalyst that leverages the existing in-country expertise and allows for as much localisation as quickly as possible (I03).**
3. Again, the pedagogy deficiencies start at the secondary school level. A powerful tool would thus be to integrate education departments in corresponding training efforts (I03).
4. So far, no "gender, diversity, and inclusion" manual has been produced – chiefly because of the conception of the topic as transversal (effects can be more significant if this aspect is considered *within* the other workstreams than as a separate item). However, the 50/50 group is preparing a document summarising the specific achievements in this field in AQHEd-SL, which could still be turned into a handbook (I08).

2.8 Project Management and Governance

In a project, the size and scope of AQHEd-SL – given the high number of stakeholders, the enormous disciplinary variation, the institutional spread across an entire country, and the considerable volume of the grant – project management is an immense task that has significant repercussions for the overall outcome. This is the reason why in this summative evaluation, we treat project management as a separate work stream with its own levels of analysis. “Output” in this context refers to the way project management was set up and implemented in AQHEd-SL (and how that changed over time). “Outcome” refers to the consequences of these structures and policies, while “impact” looks at the broader connection to overall project success. “Lessons learned” in this field are of particular relevance for funders and organisations active in the management of projects of this scope.

Note: Because of the sensitive nature of primary data in the field of project management, individual interview sources are all anonymised as "I0x". Full interview information is with the evaluator.

2.8.1 Output Level

2.8.1.1 Project Management Structures and Capacity

Given its complexity, a detailed history of the development of the management structures of AQHEd-SL is beyond the scope of this review. However, the project experienced a significant turning point that is worth analysing. To sum up: The initial project management structures of AQHEd-SL were relatively weak, and consequently, the project and its management initially hit rather significant "bumps in the road" (MTR, I0x). It was only after project management structures were strengthened and professionalised and (in-country) capacity greatly expanded that the project was set on a road to success.

According to the initial proposal, project governance was designed in such a way that USL was intended to be the lead partner and grant manager. KCL had been present in Sierra Leone already since the early 2010s and had an established partnership in the health field with COMAHS. Accordingly, its original role in AQHEd-SL was focused on capacity development and CR in health only (cf. grant proposal). However, when in “grant stage 1” (in the second half of 2017), problems became apparent, particularly in the field of financial management, the governance structure was changed. In discussions with the SPHEIR programme manager, a relatively unique model was established, in which **USL remained the overall AQHEd-SL lead while KCL became the official grant agreement holder and started serving as central fund and MEL manager** (not just in health and at COMAHS but across the entire project).

Yet, despite this significant change, AQHEd-SL did not benefit from any institutionalised full-time project management in Sierra Leone. There was **a Project Management Board (PMB)** with representatives of all consortium members and – as an executive body – a **Project Coordination Unit (PCU**) that consisted of representatives of two consortium members (in particular USL and NU faculty members), a MEL-Officer and a Finance Officer. From the second half of 2017, after KCL's role had been significantly expanded, a KCL finance officer was added, and a representative of KCL took over central project management while travelling back and forth between London and Sierra Leone (I0x). It is no

exaggeration to say that subsequently – during the entire year 2018 – AQHEd-SL was in deep waters with milestones missed, some workshops and events cancelled, financial reporting deficient, and overall management capacity low (see quarterly reports Q06, Q07, Q08). It became apparent that the original “drivers” and authors of the proposal (while being very passionate about the project), even together with a "travelling" project manager from KCL, could not provide the necessary capacity for the kind of project management and governance AQHEd-SL needed –` an endeavour that, even at the outset, spanned various institutions across Sierra Leone – each with very different levels of organisational capacity.

After a **consolidation process in the spring of 2019** moderated by the SPHEIR programme manager, a significantly enhanced and professionalised PCU was finally established – 1.5 years into the project after considerable problems with project implementation. It added to the existing structures a **full-time project director** (hired from the University of Sierra Leone as Lead Partner), a **full-time and in-country project manager from KCL**, and two **project officers** (POs), each of which was – among other things – responsible for two of the four anchor institutions and "their" topical Clusters that had been formed in the meantime (USL-FBC/STEM & UniMak/Management versus USL-COMAHS/Health & NU/Agriculture). In addition, **"Project Implementation Task Forces” (PITFs)** were formed at the participating HEIs that helped to connect the HEIs to the project, increased institutional "buy-in", and supported the HEI project members who within their respective institutions did not wield sufficient political influence to instigate the intended reform processes (I0x, I0x, I0x). After the mid-term evaluation of 2020 (and following one of its recommendations), the capacity of the PCU was further enhanced by hiring two additional POs so that eventually, each PO corresponded to one anchor institution/topical Cluster (MTR, I0x).

In the first half of 2020 (Q14), the PCU decided to take the initiative for the creation of a **High Level Task Force (HLTF)** to foster high-level political support for AQHEd-SL, to improve political acceptance of the reform processes both on the level of the HEIs as well as on the level of the government, and to further the dissemination of AQHEd-SL outputs. Chair of the HLTF is the Deputy Minister of Education; members were nominated by AQHEd-SL Cluster leads and comprise heads of ministerial departments (in different ministries), senior staff of professional organisations and other bodies. The HLTF also includes representatives from the Conference of Vice Chancellors and Principles (CVCP) as well as civil society. The HLTF provides overall political support for the project but some of its members are also involved in individual Cluster-level activities such as student career advice, placement policies, guest lectures, and even CR proper.

In the first quarter of 2021 (Q17), the PCU started becoming active on the issue of project sustainability (i.e. preserving project achievements beyond the end of project funding and ensuring the continuation of reform activities). Activities followed a two-pronged approach: On a decentralised level, AQHEd-SL partner institutions were actively encouraged to develop their own sustainability plans and to share these with the PCU and among partners (as best practice models). On a centralised level, The PCU instigated and coordinated activities on the political level, presenting the project and its successes to the Conference of Vice Chancellors and Principals (CVCP) and the Minister of Technical and Higher Education. As a result (and among other things), the CVCP incorporated an outline of the key achievements of AQHEd-SL in a submission to the President of Sierra Leone.

2.8.1.2 Monitoring, Evaluation, and Learning (MEL)

All SPHEIR-projects came with a pre-defined MEL system that (while allowing for narrative reports) was centred around a complex set of **numerical output and outcome indicators**. These corresponded to the overall logframe for SPHEIR. Indicators were mostly defined as absolute numbers such as the number of curricular modules revised, the number of HEIs participating in stakeholder engagement, the number of staff participating in trainings etc. These absolute numerical indicators were supposed to be read against **baseline values**, which were to be collected beforehand. MEL reports were due every three months (quarterly reporting).

In a nutshell, the system **did not work well**. There were two main reasons for this: (1) Relative to the necessary data collection and the high frequency of reporting, **MEL capacity was too low** – in particular at the participating HEIs (or rather: it was initially assumed to be higher than it actually was; I0x, I0x). Initially, the MEL system was poorly understood; reporting was sloppy and slow (as was noted already in the MTR). At the central project level, there was a significant turnover in MEL staff, which resulted (1) in an initial lack of proper baseline information, which in turn rendered the actual indicators almost meaningless (I0x) and (2) in deficient input to the annual MEL reviews that were part of the original plan (I0x).

As a result, **the system remained mostly remotely designed with little regard for the situation on the ground**. It seemed not tailored to the project (I0x) with indicators that sometimes made little or no sense to those who collected data on them (I0x, I0x, I0x). In particular, almost all MEL indicators captured process rather than substance and/or quality of work being done in the project (MTR).

In February 2020, the MTR summarised significant criticisms of the MEL system reported by various interview partners at the time and concluded, "Overall, the project has less a project with its activities than with properly reporting them" (MTR, p. 16). De facto, the AQHEd-SL team engaged in a more narrative, story-telling approach to MEL making outcomes more visible than the formal MEL system allowed them to (I0x). Eventually, the MEL system was more comprehensively reviewed; but **revisions were not adopted before February 2021** (I0x), i.e. only a few months before the official end of the project.

2.8.1.3 Internal and External Communications

Project communication was not an important part of the original proposal/workplan of AQHEd-SL. To make matters worse, the SPHEIR programme manager adapted a policy to have all papers, articles and even press releases *about* the work of AQHEd-SL vetted, which turned in to a significant damper for external project communication in general (I0x). As a result, no significant resources were earmarked for or spent on external or internal communications (e.g. website, blog, media work, social media presence, internal knowledge-sharing platform, etc; I0x). As was noted in the MTR, this was a significant oversight as communications could have played a crucial role in terms of (a) achieving buy-in and support from internal and external key stakeholders, (b) guaranteeing political support, (c) ensuring lateral spread, (d) positively influencing the reputation of the HE sector as a whole, and (e) maximising the capacity of the project to attract additional resources (e.g. follow up funding) (MTR, I0x, I0x, I0x).

After the MTR (and in step with the decision to strengthen the Project Coordination Unit), communications received significantly more attention in terms of budget and dedicated staff. The SPHEIR programme manager eased the vetting policy and AQHED-SL gained additional communications support offered by INASP from April 2020 and hired a communication officer in October 2020. Together, they contributed to the establishment of several communication channels (e.g. AQHEd-SL Twitter, Flickr, blog, e-newsletter) as well as regular contributions to the SPHEIR blog and some media coverage (e.g. World University News). Establishing a link to the HEI-communications officers (beyond the departments affected by CR and beyond the QA offices), however, remained a challenge (I0x).

With regard to internal communications, the project moved from one consolidation meeting (PMU, PCU, institutional leads, Cluster leads, PO, PITF, QA-people) to two meetings quarterly, which was seen as very useful to identify barriers and find solutions (I0x, I0x, F10). Moreover, the setup of various WhatsApp groups contributed to significantly faster internal information flow (I0x).

2.8.2 Outcome Level

In terms of **Project Governance,** the decision to switch the grant manager role from USL to KCL initially came with a high political cost. It was considered by some at USL as a "big blow", as a "humiliation", and as evidence of a "culture of mistrust" – particularly given the fact that USL had in the past successfully managed grants significantly larger than AQHEd-SL (I0x, I0x, I0x). Among other things, it resulted in AQHEd-SL losing support at the level of USL university leadership (I0x, I0x). However, once the decision had been taken, partners at USL decided to "bite the bullet" (I0x) and things improved over time. This is not the least due to the very constructive role played by KCL. While KCL had never intended to step into the role of the fund manager for the entire project (I0x), interviewees agreed that it really rose to the task. Initially, with the PCU still weak and understaffed (see above), KCL found itself in a rather awkward "policing role" with the rules handed down to them directly by the programme manager and KCL becoming the communication bottleneck between "London" and "Sierra Leone" (I0x). In addition, it also first had to build the necessary fund management capacity itself and train financial management staff at the partner institutions. (Before this, reimbursements were sometimes delayed, which created issues for some partners; F15). However, things improved significantly over time. First, KCL could build on the high level of trust it had established during its previous in-country work and actively helped to mend the rifts left by the decision to switch grant management (I0x). Second, with the improvements in project management capacity at the PCU, KCL eventually had a strong partner in dividing the actual management tasks, which also altered the way in which KCL was perceived in the project (I0x, I0x, F15). Third, the programme manager showed flexibility and responsiveness in adapting, e.g. the funding modality manual (I0x). And last but not least: Capacity-building efforts paid off: By the summer of 2021, there was a general consensus that financial management staff in partner institutions was much more confident now and that things in terms of reporting, documentation as well as accounting were running quite smoothly (F15).

Project Management Structures and Capacity were, initially dangerously weak. "Dangerously" refers here to a situation in which project events were cancelled, milestones were missed, and financial reporting had significant deficiencies. It came to a point where the SPHEIR programme manager was pondering the question of whether the project could be continued. Please note that it came to this

despite the fact that the fundamentals in terms of project plans, individual dedication, and institutional buy-in were all there (as is evidenced by the further history of AQHEd-SL). Over the course of 2019, there was a significant turn-around of the project, which was clearly linked to the strengthening of project management structures. This was already the overwhelming view in the interviews for the MTR (conducted in early 2020; see MTR, p. 6), and this was confirmed – across the board – in the primary data collection for this summative evaluation (in the summer of 2021; F03, F04, F10, F09, I0x, I0x, I0x, I0x). The further strengthening of the PCU after the MTR led to further improvements in this regard (I0x, I0x).

The initially low MEL capacity, as well as the design flaws of the MEL system as a whole, further exacerbated the situation in 2017/18. While the problems of the project (particularly in project management) were real (see above), its (also existing) successes were left invisible via the MEL system and led to an unbalanced impression. In other words: In MEL, the project looked even worse than it actually was. The MEL system did not provide an accurate image of the progress of the project, which resulted in not receiving useful input from the programme manager. It is quite significant that in terms of informing the SPHEIR programme manager about the state of affairs in AQHEd-SL, the MEL system and the MTR pointed in opposite directions. Had it not been for the MTR, AQHEd-SL might have been terminated despite its enormous potential, as evidenced in this summary evaluation. This fact alone illustrates the significant inaptitude of the MEL system as a whole. Moreover, despite the MTR and its results, the MEL system remained largely unchanged and developed into a separate workstream – largely unconnected to the actual workflow in the project and executed chiefly as an "inconvenient duty" vis-à-vis the programme manager rather than as a transversal workstream that would have actually helped steering and continuously improving the project. (I0x, I0x, I0x).

> ***"MEL could have told a wonderful story from the beginning to the end. But the MEL system did not provide an accurate image of the progress of the project. The MEL system and capacity must correspond to the project at hand."***
> *PCU Representative, I0x*

The lack of planning and resourcing for **communications** contributed to the initial internal underperformance of the project. In this regard, the MTR provided the opportunity for a turnaround in internal as well as external communications. While the internal outcome of improved communication is palpable in the way the project was running from 2019 onwards (and was also evidenced in various interviews; e.g. F03, F04, F10, F09, I0x, I0x, I0x), the effects of external communications are harder to evaluate. On the one hand, the improved communications resulted in strong buy-in and support from key stakeholders (incl. policymakers) and significantly contributed to successful project implementation (I0x, I0x, F10). On the other hand, the evaluation of CR/SE in the different topical Clusters has demonstrated that some stakeholders and students still do not feel well informed about the further development, e.g. of the curricula and (the future of) the project as a whole (see above section 2.2.4, 2.3.4 and 2.4.4). By now, the logic of communications is clear and accepted across the project (I0x, I0x, I0x); however, the implementation in practice might not have had the chance to reach its full potential ("too little, too late"; I0x).

With the establishment and the activities of the **HLTF and the centralised sustainability activities** (involving the CVCP, Ministers, and even the President), AQHEd-SL now has the political attention that its significant successes deserve. However, these structures were established relatively late in the project (Q14 and Q17) respectively. Building and maintaining them from the outset of the project might have gone a long way to ensure political support, which, in turn would have facilitated lateral spread and broadened the reach of the project.

2.8.3 Impact Level

Project management and governance do not speak directly to the overall goals of AQHEd-SL and SPHEIR. It did, e.g. not directly change graduate qualification and employability like CR in the different Clusters did. It did, however, still have three very significant impact effects:

(1) **Project management and governance turned out to be the decisive *condition sine qua non* for the overall success of the project**. While deficits in project management significantly endangered the project as a whole in its early stages (2017/18), it was the fundamental reform of these management structures that made the subsequent successes possible. There is no other success factor that was so widely cited across almost all interviews conducted, and it is no less evident from secondary sources (compare the quarterly reports from Q06/Q07 to the ones from Q09/Q10 or Q13/Q14). Project management is thus the single most powerful enabler for all other impacts described in this report.

(2) "Improved overall quality of the HE sector" and "systemic reform" are overarching goals of AQHEd-SL and SPHEIR. There can be little doubt that AQHEd-SL had **significant capacity-building effects** that are relevant for the HE sector and systemic reform. This applies to project management in general and financial management in particular. It will clearly facilitate future projects and future reform in the HE sector.

(3) Albeit relatively, the PCU has managed to establish and activate **high-level political support structures** (HLTF, CVCP, Ministries) that will significantly help the sustainability of all the initiatives that were started under AQHEd-SL.

2.8.4 Lessons Learned

Given the strong variations in outcomes, the core lessons with regard to project management and governance can be easily summarised:

- After project start, **governance structure in terms of the division of labour between project partners should only be changed if absolutely unavoidable**. If this case still arises, measures have to be taken to buffer the political side-effects. Feelings of "humiliation" and "mistrust" should be avoided at all cost.

- From the beginning**, programme management capacity (including overall steering capacity, financial management capacity and MEL and reporting capacity) has to be soberly assessed, and the necessary resources have to be factored into project planning.** This concerns financial plans as well as time plans that should allow for capacity building to take place and take effect. In particular, capacity should never be assumed but should rather be tested and built if lacking. The effects for the overall success of the project are so great that it is better to err on the side of too much management capacity rather than on the side of too little. In particular:
    - Do not assume but assess and build management capacity.
    - Frontload management capacity development and financial management capacity development (F15).

- Plan for adequate staffing of project management – adequate to the number and level of actors that need to be coordinated.
- Staff project management (at least also) locally, on-site, and full-time.

- Develop a **MEL system** that works for the project as well as for overall programme management:
  - Do not assume but assess and build MEL capacity.
  - Frontload MEL capacity development.
  - Do not focus mainly on numerical indicators (allow for narratives or MSC technique).
  - Adapt the MEL system flexibly to the development of the project.
  - Design the MEL system in such a way that it (a) provides an accurate picture of the situation in the project (e.g. triangulated by interviews or external evaluations), (b) actually helps to steer and continuously improve the project.

> ***"Move away from this obsession with numerical indicators – it's the outcome that's relevant!"***
> *PCU Representative, I0x*

- Consider **communications** as a topic of key strategic relevance for the project:
  - Do not assume but assess and build communication capacity (I0x).
  - Frontload communications capacity development.
  - Ensure adequate resources for communications (including a local communications professional).
  - Design internal communication channels that facilitate project implementation; in particular: plan internal communications relative to partner/stakeholder structure.
  - Adapt communication channels to the local context.
  - Adapt communication policy to HEI communication structure (limited connectivity between different units).
  - Design external communication channels that facilitate the strategic positioning of the project in its local political context relative to strategic goals like HE sector reform.

- In a project of this scale and ambition, **frontload the development of high-level political support structures** (such as the HLTF and the centralised sustainability activities) that specifically address HEI leadership as well as central political players on the level of affected ministries.

2.9 Evaluation Summary

Note: This summary considers only output, outcome and impact evaluation as "lessons learned" are extensively covered in the whole of section 3 below.

2.9.1 Output Level

The output-level evaluation of AQHEd-SL can be summarised in one sentence: The project has delivered on all of its intended outputs; it has partly exceeded the original plans and it has flexibly adapted to changing circumstances whenever needed (e.g. in the Covid-19 context).

2.9.1.1 Curriculum Review and Stakeholder Engagement (CR & SE)

- Topical Clusters were formed in four core academic fields (STEM, Health, Agriculture, Management); pairs of "anchor" and "waterfalling" institutions were formed, and for all of them relevant academic programmes on the BA-level were chosen for CR.
- **Across all thematic Clusters CR was completed**, i.e. eight relevant programmes were selected, in almost all cases all modules of the respective programmes were reviewed, by September 2021 approval for almost all of these modifications was complete, and rollout had started. (COMAHS and FTC had to switch programmes but managed to make up for the resulting delays and caught up with the other HEIs/Clusters).
- CR changed the content of the respective s in a number of clearly identifiable ways. Most notable among these are:
    - Update of outdated content.
    - Practice orientation with regard to curricular content and the integration of "soft" skills.
    - Localisation of content with regard to applicability in SL.
    - Reduction of redundancies and increases in flexibility and student choice.
- In all cases, CR went hand in hand with extensive **stakeholder engagement** across public, private, and 3rd sector institutions. **More than 160 individuals from close to 100 different organisations** (!) were involved as "stakeholders/employers" with AQHEd-SL over the lifetime of the project. They gave extensive feedback on needs of the labour market and their advice was a significant input to the CR process.
- At the same time, SE went far beyond CR and resulted in various MoUs that covered guest lectures, internships, work placements, common workshops, professional exchange, knowledge sharing, common projects, and even the participation of stakeholders in theses defences.

2.9.1.2 Quality Assurance

- Although officially put on hold in the early phases of the project, AQHEd-SL eventually succeeded in developing a **National Qualification Framework (NQF**) for HE in Sierra Leone. A two-day stakeholders validation workshop was held for the NQF in Sep 2021, which was

launched by the Minister for Technical and Higher Education. The process will now be taken over by the TEC.

- A one-year 15 credit **post-graduate Diploma in QA** was established as early as 2018. **Three cohorts of students (34 individuals**) graduated within the lifetime of AQHEd-SL.
- The graduates now work as QA officers at the TEC and in the project HEIs – all of which have set up dedicated **QA offices** that watch over teaching standards, assignments and evaluation and various other aspect of QA.

2.9.1.3 Templates and Standardisation

- **Four standardised templates** were developed over the lifetime of AQHEd-SL:
    1. Curriculum Review Manual Vol. 1 ("Overview of Curriculum Review Process and Curriculum Review Templates")
    2. Curriculum Review Manual Vol. 2 ("Analysis of Curriculum Mapping Data")
    3. Quality Assurance Manual
    4. Pedagogy Manual
- All documents were validated by AQHEd-SL HEIs and eventually **officially endorsed by the TEC**. As such, they will define standards in the fields for years to come.

2.9.1.4 Training

- **Six different trainings** were developed and run by AQHEd-SL (either in cooperation with external partners or exclusively in-country):
    - Pedagogy 1, 2 and 3
    - Critical Thinking
    - Gender, Diversity, and Inclusion
    - Quality Assurance
- A total of **645 participants (475 unique individuals)** took part in these trainings over the lifetime of AQHEd-SL. This rather high number is also an indication of the relevance the sending institutions attached to AQHEd-SL.
- Most of the training material is available for further use. Covid-19 has led to an almost complete local takeover of training that thus can be easily continued.

2.9.1.5 Project Management and Governance

- Although initially quite challenging, **AQHEd-SL eventually developed well-staffed, and well-qualified structures** for:
    - Project steering (management proper)
    - Financial management and reporting
    - MEL reporting
    - Internal communications
    - External communications
- By the second half of its lifetime, AQHEd-SL was overall well managed, had functioning communication lines, fulfilling all reporting requirements and met all of its milestones.

2.9.2 Outcome Level

Based on these outputs, the **key outcomes** of AQHEd-SL can be summarised as follows:

- **Curriculum Review (CR)** in the selected programmes is complete and locked-in. It has significantly improved the affected curricula in terms practice orientation and employability of students.

- **Stakeholder Engagement (SE)** has led to an entirely new level of cooperation between HEIs and a rather large number of stakeholders/employers. This is partly locked-in via MoUs. In cases where there are no MoUs, sustainability is still extremely likely given the highly positive (sometimes outright euphoric) statements about mutual benefits from SE from all kinds of faculty members and stakeholders.

- There are indications of **lateral spread of CR/SE** within the respective HEIs. In some cases (EP, MMCT and – to a lesser degree – FTC) there was an institutional interest in using the AQHEd-SL process across the entire HEI to update its status to a "full" university (**in the case of EP and MMCT, this is a rather significant achievement of AQHEd-SL in its own right).** In other cases, there are "spill over" processes where CR/SE is imitated in programmes topically close to the ones under review in AQHEd-SL. The official endorsement of the AQHEd-SL CR process by the TEC and the widespread dissemination of the handbooks and templates makes sustainability also likely. However, the actual political support of the level of HEI leadership is mixed. *Political* follow-up processes would be beneficial for further lateral spread.

- The processes in external **Quality Assurance (QA)** have led to an NQF for HE in SE that will contribute to the standardisation of education levels in Sierra Leone, increase the mobility of students and staff and make HE in SL significantly more compatible with standards in the region.

- The **mission and standing of the TEC** have been significantly improved along with the level of qualification of its staff. It has become the central clearing house for CR and QA in SL HEIs.

- The **post graduate diploma in QA** has led to a community of QA officers across HEIs and TEC with a common vision and common identity that clearly identify with the mission to bring QA to HE in SL.

- The **institutionalisation of QA offices** across the partner HEIs has led to tangible consequences for students and lecturers in terms of improved teaching, learning and evaluation experiences as well as the overall perception of instructional "responsiveness".

- The work on **templates and standardisation** has significantly enhanced the processes in CR and QA and led to comparable results across the involved HEIs. At the same time, it has contributed to lock-in in CR, QA and pedagogy by defining standards that were officially endorsed by the TEC.

- The **training measures** were extremely positively evaluated by academic staff and students alike. Both groups of stakeholders reported positive effects on their teaching experience across all Clusters.

- **Lateral spread** in this field is particularly likely given that there is a high interest in non-AQHEd-SL faculty members to learn about such methods and the increasing reliance on "train-the-trainer" models in training.

- Via the trainings, AQHed-SL succeeded in significantly increasing **awareness for gender, diversity, and inclusion** with tangible consequences, especially for female students.

- Unexpectedly, the Covid-19-pandemic has necessitated an **increasing reliance on asynchronous e-learning tools and in-country capacity**. Both are rather beneficial in terms of sustainability.

- Over the course of AQHEd-SL, **collaboration between the HEIs** participating in AQHEd-SL has increased significantly. In fact, AQHEd-SL has, for the first time, created a "common identity" among SL's HEIs (I05).

> ***"SPHEIR was a great platform to bring people/HEIs together and create a common understanding, vision, exchange knowledge, connect with stakeholders and built capacity. This is the first time in the history of Sierra Leone that we are together in one room."***
> *HEI QA Officer, F01*

- **Project Management and Governance** in AQHEd-SL has led to significant capacity-building effects in management proper, financial management, reporting and documentation, as well as internal and external communications. This, in turn, has already had effects on other projects.

> ***"SPHEIR has influenced how other projects are implemented (e.g. documentation) and has given us confidence in our ability to manage big projects."***
> *NU Representative, F10*

Section 1.3.1.1 above introduced a set of criteria for the outcome evaluation. Based on the summary outlined above, it is now possible to conclude on these criteria (see table 18 below): AQHed-SL has achieved <u>all</u> intended outcomes. The only caveat is the limited (lateral) spread of reform ideas in CR so far.

Criterion	Outcome
Sustainable curriculum reform in terms of labour market needs and employability	yes
Sustainable and effective structures for stakeholder involvement	yes
Innovation in teaching and learning methods	yes
Spread of reform ideas within and across universities	(yes)
Sustainable and effective capacity and structures of quality assurance	yes
Capacity building for project management, financial reporting, and MEL	yes
Increased awareness for gender-inclusivity and diversity	yes

Table 18: AQHEd-SL Outcome Summary

2.9.3 Impact Level

The overall Theory of Change (ToC) of the SPHEIR programme identifies HEIs contributing "more effectively to economic growth and development, public institutions, and civil society" as the ultimate impact goal of the programme. Clearly, it is too early to tell whether AQHEd-SL will render such effects. Below this highest level of abstraction, however, the ToC mentions three "long-term-outcomes" that can be summarised as follows (see also section 1.3.1.1)

- Changes in graduate qualification and employability relative to the labour market needs.
- Improved overall quality of the HE sector.
- Systemic reforms and strengthened regulatory framework for HE.

From the outcome evaluation, it is clear that AQHEd-SL has had positive effects on all three of these "long-term outcomes" already: **(1) The CR/SE-processes have already had effects on graduate qualification and employability; SE has ensured a calibration by labour market needs. (2) The same processes along with QA, standardisation, and training has improved the overall quality of the HE sector. Finally, (3) processes like NQF-development, the upgraded role of the TEC, the endorsement of templates, the institutionalisation of QA; the establishment of the post-graduate diploma are important first steps in systemic reform and improvement of the regulatory framework.**

The only significant caveat is the extent of lateral spread of CR and SE. Given that all the tools and processes are in place and well-established (QA; templates; training tools; etc), the question of lateral spread will remain chiefly a political question. In this particular field, two structural weaknesses of the AQHEd-SL ToC become visible:

(1) The ToC structurally underestimated the importance of **lateral spread**. While "waterfalling" was designed to ensure *inter*-university spread; the (quantitatively much more significant) *intra*-university spread had no such mechanism built into the ToC and happened mostly unplanned as a positive externality. To be sure, some of its successes (as in the broad reforms of EP and MMCT) were spectacular, but this was, in fact, a positive externality rather than a planned feature of AQHEd-SL.

(2) Against this background, it becomes visible that the ToC underestimated the **political dimension** necessary to achieve transformational change in the entire HE sector (which – given its scope – is *ipso facto* political). This becomes visible, e.g. in the neglect of (external) communications, which could have been key in embedding the project work in a broader political process and in the relatively late introduction of institutions such as the High-Level Task Force (HLTF). An institution such as the HLTF should have been established from the outset of the project; considerations of sustainability should have accompanied all steps of project implementation.

To ensure that what has started with AQHEd-SL will not end with the project, further political processes will be decisive – on the level of the Ministry of Education as well as – in particular – on the level of HE leadership. Particularly noteworthy in this context is the institutionalisation of the **Conference of Vice Chancellors and Principles (CVCP)** that did not exist prior to AQHEd-SL and that constituted for the first time a forum for HE leadership in SL to coordinate, to exchange ideas, and to jointly discuss reforms. So far, the CVCP holds a very favourable view of AQHEd-SL. AQHEd-SL key staff met with the **SL Minister of Technical and Higher Education** in the summer of 2021 to talk about the future of the reforms started with the project and funding for the CVCP (I05). These are significant indications that AQHEd-SL has provided various stimuli for the pursuit of further reforms to become truly systemic.

The groundwork is extremely solid. **AQHEd-SL was very successful in providing SL with all the necessary tools to achieve true systemic reform**. It will be decisive to create a political atmosphere in which these tools are used ever more broadly.

However, while the overall impact is impressive and the corresponding ToC is no less impressively confirmed, the evaluation has also shown that there were **two structural weaknesses in the overall approach of the SPHEIR programme** that constituted barriers to an even more significant impact. of AQHEd-SL:

(1) The SPHEIR approach did not place a particular emphasis on **research**. Some elements of research capacity were part of the trainings; some elements of research are also covered in the QA handbook. Still, research capacity and research practice were not in the focus of the SPHEIR approach despite the fact that that (a) research capacity in HEIs in SL is lacking and that (b) research capacity has powerful effects for the quality of teaching. Reminiscent of the Humboldtian model of higher education, most stakeholders agreed that research and teaching should be holistically combined and mutually inform and reinforce each other.

(2) The SPHEIR approach did not focus on **physical teaching tools and equipment** (with some notable exceptions in the Health Cluster). The evaluation illustrated that this set absolute limits to what CR could achieve: If teaching equipment, tools, and hardware are lacking, some elements – especially modernised – of the curricula are difficult to implement. Some of this could be offset by SE, but there was no systematic approach to the potential of SE for access to teaching equipment nor was equipment a significant part of the SPHEIR programme as a whole.

Note that these issues do not represent deficiencies in programme implementation or project implementation. Instead, they were built into the SPHEIR approach. While the necessity of focus and selectivity in programme development is self-evident and while funds (albeit generous) were limited, this has constrained the potential of AQHEd-SL to achieve an even higher impact. At the same time, these insights can inform future projects in the HE field (see section 3.7 below).

3 Lessons learned and Implications by Intended Use

3.1 Learning from Success

Overall, AQHEd-SL as a project, **was a remarkable success**. As an evaluator, it is rare to see a project achieve so many of its originally intended outcomes while, at the same time, so closely being able to realise its original ToC. This begs the question what it was that made this success possible and what is to be learned for future projects in SL and beyond. Looking at the project as a whole and considering the analysis given by project protagonists themselves, a number of factors stand out:

1. AQHEd-SL was a project that was **truly and fully Sierra Leonean owned**. The "masterminds" behind the project (i.e. a group of actors located chiefly in and around FCB at USL) wanted systemic HE reforms significantly *before* the SPHEIR call for proposals. They thus identified strongly with the project, brought a growing number of actors from other HEIs (and other stakeholders) together and formed a highly dedicated group that was willing to contribute to the success of the project above and beyond personal advantages – and continued to do so despite the difficulties in the early stages of the project.
2. Given the state of affairs of HE in SL and the structural deficits clearly spelled out in the original proposal, **the time was ripe for reform and change**. While there certainly was and is no consensus on the matter, a significant number of stakeholders across the country realised that reform was overdue.
3. Against this background, SPHEIR thus created primarily an enormous window of opportunity to realise pre-existing ideas and to become an instrument for the intentions of various actors. In fact, the most accurate metaphorical description of the role of SPHEIR and AQHEd-SL is that of a **catalyst that greatly focused and accelerated change that was already "in the air".**
4. For many stakeholders, AQHEd-SL created a **mutually reinforcing logic** by which project activities (such as SE and trainings) led to personal (academic or professional) “growth” or tangible benefits, which, in turn, increased the dedication to the project, which increased the benefits, etc. To leverage personal interest in this manner turned out to be an extremely powerful mechanism supporting ensure project success.
5. The same is true for institutional interest. In some, particularly noteworthy cases **AQHEd-SL managed to leverage the interest of an entire institution.** This includes the TEC (that has gained more from the project than it initially anticipated and EP and MMCT (that used AQHEd-SL for the purposes of institutional development). Please note, however, that these were positive externalities that were not originally foreseen.
6. AQHEd-SL clearly managed to create a **common bond and a common identity** around it – across different HEIs in SL, but also across HEIs on the one hand and stakeholders/employers on the other hand (not least the TEC!). Particularly important elements of this process were the waterfalling concept, the common post graduate programme in QA and the common training sessions. This "common identity" and "common language" greatly increased the identification of stakeholders with the project and allowed for a cooperative project management that was key to success.

These success factors can be easily translated into a set of general lessons for the further development, design, and implementation of projects:

1. In an ideal case, projects should catalyse changes that are locally intended by a significant group of stakeholders that are able to form a dedicated and stable coalition with the intention to instigate lasting change.
2. The formation of such a coalition is made possible by a set of "political entrepreneurs" dedicated enough to shoulder the initial cost of setting up this coalition and maintaining it over time. Project planners thus have to identify such entrepreneurs. These can be inspired (as was the case in QA) by stimuli such as training abroad.
3. The higher the local participation with the project, and the more responsible the respective role, the greater the capacity development effects and the deeper the local ownership. Projects should thus be as "local" as possible and use external (international) actors primarily as sources for selective inputs to be eventually superseded by local structures.
4. Projects are successful if they manage to leverage personal and institutional interest for its purposes, i.e. a project should have a built-in logic by which the sustainable success of the project translates into tangible benefits for stakeholders.
5. Projects benefit enormously from the creation of common identities around them that allows stakeholders to use the project as a common forum.

3.2 The future of CR and SE in SL

As mentioned before, at the end of AQHEd-SL the state of affairs with regard to CR and SE *in the selected fields and programmes* is very positive indeed. The key to even more reform and change are (a) continuation, (b) lock-in, and (c) spread:

a. As a number of interviewees noted CR is never "over". In fact, given the changes in academia as well as in the practice world, **CR should be seen as a continuous, cyclical process**. This logic can be ensured on the practice side by continuous SE and on the academic side by a systematic link to research (that AQHEd-SL was lacking).
b. An approved new curriculum is locked-in but this does not guarantee the **lock-in of cyclical reform**. This needs acceptance *as such*; i.e. stakeholders must be willing to agree on cyclical CR as an institutional feature. This needs buy-in and endorsement by HEI leadership, which needs a dedicated *political* process. **Lock-in in terms of SE** can be achieved by MoUs, but also by creating a clearing house of ideas for the many different possible forms of SE. In addition, alumni work can be leveraged for the purposes of SE (as alumni eventually turn into stakeholders as they proceed in their careers).
c. The summative evaluation has mentioned numerous times the strategic importance of **intra-university lateral spread**. AQHEd-SL has not been able to give much attention to this, but has laid important groundwork (e.g. by train-the-trainer approaches). Ultimately, lateral spread depends on two essential factors: (1) political buy-in by HEI leadership (in this regard the CVCP is decisive!) and (2) tangible benefits for individual faculty members. Spread, however, can also refer to a **vertical waterfalling to secondary education**, which will have powerful effects on students entering university. Clearly, the need for curricular and pedagogical reform in secondary education in SL is there. The spread to teacher education has begun via FTC but could be pushed significantly further.

It should be mentioned that the evaluation also brought to light very clearly that there are absolute limits to the potential of CR given **restrictions in physical teaching tools** (access to computers, software, lab equipment and consumable, tools for practice education, etc). While some of this can be offset by SE (the employers giving access to some hardware), HEIs will need better tools to fully realise the potential of the reformed curricula.

A final restriction of the reach of CR is the **limited availability of sufficiently localised textbooks and teaching material**. Localisation of curriculum content is not only a cultural issue (of intellectual emancipation), it is also the flipside of practice orientation (without localised textbooks application cannot work according to local needs). The localisation of teaching material would thus be a very helpful project to maintain the spirit of AQHEd-SL.

3.3 The Future of QA in SL

Based on the evaluation results it is not far-fetched to claim that the future of QA is bright. The TEC has fully taken on the QA paradigm, has upgraded its status and standing; there are QA offices at HEIs who think in-line with the TEC approaches and all this is based on a significant group of QA officers the common identity of which is so strong that they want to form their own professional organisation. However, the future of QA will still depend on a number of factors:

1. The **continuing dedication of the TEC to QA** will remain key – even more so when the NQF is in place and the TEC will become its custodian. In the long run, this will only be possible if the TEC, Ministry of Education and the CVCP are fully aligned in this field. Maintaining good relationships in this "triangle" is thus of paramount strategic importance for QA.
2. The NQF is a very significant step for HE in SL. Two aspects are particularly relevant for the future: (a) the NQF for HE should be brought in sync with the existing **NQF-proposal for TVET** and (b) the NQF's potential will only be realised if it is being used as a steppingstone for **academic cooperation in the region**. At this point, it is unclear who should be the chief protagonist of such an endeavour.
3. The **post graduate diploma in QA** is an extremely valuable asset for the HE sector in SL as a whole. While there are strong indications that its future at UniMak is ensured, its funding also has to be sustainable in the long run. Also, given the limited size of the "market" for QA officers in HE in SL, it is advisable for this programme to remain unique – no matter where and how it is accredited. Multiple QA diplomas, diverging approaches, and a competitive frame run counter to the idea of a common QA language and identity.
4. The **QA professional organisation** seems like an excellent idea to maintain and develop the common mindset of QA officers around the country. Its formation and maintenance should be supported in whatever way possible.

3.4 The Future of Standardisation

With the four core manuals produced by AQHEd-SL, rather significant groundwork has been laid for the standardisation of CR, pedagogy and QA. However, it is evident that these manuals will eventually have to be updated and expanded.

1. The TEC was considered the logical “torchbearer” for further development and for continuous revisions of the manuals and templates after the end of AQHEd-SL. However, the manuals are much broader than QA and topics such as pedagogy are further removed from the TEC's mandate. It seems thus rather attractive to find a **division of labour between the TEC on the one hand (QA) and the CVCP on the other hand (CR, pedagogy) in terms of updating and expanding the manuals**. For this purpose, the CVCP could form inter-HEI committees.
2. **Gender equality, diversity, and inclusion constitutes a "low hanging fruit" for another handbook** or best practice manual that could become part of the set of standardisation documents. Most of the necessary material is already there, and while this is a transversal topic (taken up in the other documents as well), the very existence of a separate manual would highlight its strategic significance.
3. **Stakeholder Engagement** is another AQHEd-SL workstream that could be the object of a comprehensive manual that collects best practices, identifies major opportunities and obstacles and introduces challenges such as enabling close cooperation while maintaining academic integrity and independence.

3.5 The Future of Training

The trainings that were conducted under the umbrella of AQHEd-SL were one of the most popular outputs of the project. There are three essential reasons for this: (1) The trainings filled a gap in professional training that was clearly felt by the vast majority of faculty members, (2) the trainings thus most strongly leveraged individual interests, (3) the trainings were organised across HEIs and thus strongly contributed to the formation of a common identity "around" AQHEd-SL. All three elements remain relevant for the future. In other words:

1. Trainings will remain very popular; the **pool of potentially interested faculty members across HEIs in SL is still very large**.
2. The increasing establishment of the **"train-the-trainer"** approach has led to a localisation of the trainings that makes it significantly easier to sustain them.
3. At least some trainings should still aim to unite faculty members across different HEIs.
4. Given that the deficiencies in pedagogy start at the secondary school level, a powerful tool for "spread" would thus be to integrate education departments in pedagogy trainings efforts.

3.6 The Implications of the AQHEd-SL Project Management and Governance Experience

Section 2.8.4 has already drawn out most of the implications of the project management and governance experience of AQHEd-SL. These can be combined with the "lessons from success" (section 3.1 above). A summary of key points would have to include the following advice:

1. Design projects as catalysts for change that is "in the air" and fully locally intended.

2. Find strategically placed "political entrepreneurs" who are intellectually *and* politically able to sustain such an endeavour.

3. Maintain equitable relations between all project stakeholders – across the donor-recipient divide (and among all stakeholders).

4. Design projects in such a way that they create a common identity *and* leverage individual and institutional interests for project success.

5. Trust local capacity to "rise to the task" and localise projects as much as possible while maintaining strong project management capacities.

6. Evaluate and assess management capacity before any project.

7. Plan for and frontload capacity building wherever needed (be generous rather than thrifty; the long-run benefits easily outweigh the cost).

8. Build strong and well-staffed project management units (again: be generous rather than thrifty; the long-run benefits easily outweigh the cost).

9. Do not "blueprint" MEL, do not rely chiefly on numerical indicators. Allow for flexibility and adaption. Design a MEL system that, rather than "producing numbers", truly helps to adequately assess a project and help in its governance. Make "L" in MEL a real possibility.

10. Depending on the number of project stakeholders: Do not underestimate the importance of internal communication flows and platforms. Resource them upfront and generously and use resources to design them.

11. Always consider the political context (within HEIs, across HEIs and in the HE political sector as a whole) of a project and build external communication tools accordingly to the corresponding strategic considerations. Resource this upfront and generously.

3.7 Future Projects

It seems unlikely that an opportunity with the breadth and scope of SPHEIR will come around any time soon. However, during the evaluation, numerous "interfaces" could be identified where

significantly smaller projects that could be pitched to a variety of donors or connected to existing calls and funding lines could ensure the sustainability of AQHEd-SL achievements. The most prominent among these are:

- Given that AQHEd-SL has laid so much solid groundwork, **lateral spread could become the explicit focus of one or more projects**. Rather than targeting the entire HE sector, it seems likely that such an endeavour might attract funders focusing on specific fields (with potentially high development impact). The already existing AQHEd-SL "Clusters" are ideal for this purpose. The aim of more specific projects could thus be to generalise CR and pedagogy across, say, health education in SL (medical sciences, nursing, etc) based on the work already done in pharmacy. The same could be argued for engineering, agriculture, and management/business. Such a project would be particularly interesting for funders affiliated to specific topical fields (such as health) and it could leverage the interest in certain topical fields in the standardisation of education and qualifications.

- Stakeholder Engagement was very successful in AQHEd-SL. However, it proceeded differently in different Clusters and took different forms. It would be extremely useful to pool the respective expertise, **consider an additional (standardised) manual on SE (that would include guidelines on academic integrity and independence) and create a clearing house for the different possible forms and best practices of SE**. This could also be a clearly defined project that would build on the work of AQHEd-SL.

- AQHEd-SL had two significant gaps that are attractive for follow-up projects that could build on the achievements of the project while truly breaking new ground:

    - **The strengthening of research in SL** and its connection to teaching (this could focus on grant writing, research methodology, publication strategies etc).
    - The **improvement of physical teaching tools** such as computers (hardware/software), lab equipment, lab consumables, and physical teaching objects.

    In both cases, an exhaustive nationwide coverage is beyond the capacity of any single donor. However, following the "Cluster-approach" of AQHEd-SL "light-house projects" could go a very long way to illustrate what is possible in the context of SL. While this comes at the price of deepening inequality between SL HEIs, the clever distribution of resources ("pairing" and "waterfalling" etc) could offset these effects and would create strong incentives (that were shown to be decisive to project success).

- One of the most important effects of AQHEd-SL was the creation of "community" between SL HEIs and academic staff (as well as HEIs and stakeholders). To maintain this a **series of focused workshops/trainings** (on QA, on the NQF, on CR, on train-the-trainer pedagogy, etc) could be launched. It needs little funding and would go a long way to maintain the AQHEd-SL "spirit".

- The **merger of HE NQF and TVET NQF and its further development and usage** for national and international students' mobility could be a "small" project with potentially very significant effects.

- The **maintenance and sustainability of the post graduate degree in QA** could also become a project in its own right. It would have a clearly defined market as well as a clearly defined audience and it could develop a sustainability strategy over its lifetime.

- The **localisation of textbooks and teaching materials** is an almost ideal project from a donor perspective: It fits the increasingly common frame of "localisation"; it has clear (physically) tangible products; impact measurement is rather easy (by actual use) and there is a pre-defined exit point.

- As was noted in the interviews, the work in the field of **gender, diversity, and inclusion** is far from over. While, again, AQHEd-SL has broken new ground in HE and laid solid foundations, much remains to be done to achieve – as one interviewee put it – "cultural change". This field is also highly attractive to (particularly non-state) donors. Few of them, however, specialise in HE. Further funding opportunities might thus lie in combining work on the topic in HE with e.g. the same approach to school or workplace relations (in order to capture the entire "professional life-cycle" of individuals).

4 Appendix

4.1 AQHEd-SL Quarter Count Identifier

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Grant Stage
2017	Q01	Q02	Q03	Q04	**Call / 1**
2018	Q05	Q06	Q07	Q08	**2**
2019	Q09	Q10	Q11	Q12	**2**
2020	Q13	Q14	Q15	Q16	**MPR / 3**
2021	Q17	Q18	Q19	Q20	**3**

4.2 Summative Evaluation Focus Group Discussions and Individual Interviews

ID	Name	Organisation	Stakeholder Role	Date	Time	Duration	Location
F01	Sullayman G. Mansaray	EP	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Sam Kargbo	UNIMAK	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Moses Conteh	UNIMAK	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Hawanatu Z. Kabbia	NU	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Joseph Mbavai	NU	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Fatmata Fullah	FTC	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Jeremiah Victor Harding	FBC	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F01	Antoinette Turay	FBC	QA Internal	02 Aug 2021	10:00	01:30	Freetown
F02	Ronnie Frazer Williams	USL	QA External	02 Aug 2021	14:00	01:30	Freetown
F02	Joseph Sherman Kamara	TEC	QA External	02 Aug 2021	14:00	01:30	Freetown
F02	Aiah G Sour ie	TEC	QA External	02 Aug 2021	14:00	01:30	Freetown
F02	Josephus Sawyer	TEC	QA External	02 Aug 2021	14:00	01:30	Freetown
F02	Emanuel Kamara	TEC	QA External	02 Aug 2021	14:00	01:30	Freetown
F02	Nadia Parkinson	TEC	QA External	02 Aug 2021	14:00	01:30	Freetown
F02	Victor Alien	TEC	QA External	02 Aug 2021	14:00	01:30	Freetown
F03	Joseph Edem-Hotah	COMAHS	Faculty	03 Aug 2021	10:00	01:30	Freetown
F03	Idriss O. Kamara	EBKUST	Faculty	03 Aug 2021	10:00	01:30	Freetown
F03	Susanne Thomas	KCL	Faculty	03 Aug 2021	10:00	01:30	Freetown
F03	Mamadu Jalloh	EBKUST	Faculty	03 Aug 2021	10:00	01:30	Freetown
F03	Francis I. Turay	EBK	Faculty	03 Aug 2021	10:00	01:30	Freetown
F04	Samba Sesay	FBC	Faculty	03 Aug 2021	10:00	01:30	Freetown
F04	Sullayman G. Mansaray	EP	Faculty	03 Aug 2021	10:00	01:30	Freetown
F04	Hoggard Saffa Bockarie	EP	Faculty	03 Aug 2021	10:00	01:30	Freetown
F04	Kepia Boima Conteh	EP	Faculty	03 Aug 2021	10:00	01:30	Freetown
F04	Melvin S. Haffner	FBC	Faculty	03 Aug 2021	10:00	01:30	Freetown
F04	Francis Peacock Cole	FBC	Faculty	03 Aug 2021	10:00	01:30	Freetown
F05	Moses Batema	NMSA	Employers	03 Aug 2021	14:30	02:00	Freetown
F05	Dennis Thomas	MoHS	Employers	03 Aug 2021	14:30	02:00	Freetown
F05	John Smith	PhamBA	Employers	03 Aug 2021	14:30	02:00	Freetown
F05	Abubakarr Bangura	YPhG	Employers	03 Aug 2021	14:30	02:00	Freetown
F06	Victor Sesay	MTHE	Employers	03 Aug 2021	14:30	02:00	Freetown
F06	Robin F Mansaray	MoE	Employers	03 Aug 2021	14:30	02:00	Freetown
F06	Abdul Bah	NATCOM	Employers	03 Aug 2021	14:30	02:00	Freetown
F06	Mohamed M. Jalloh	MoIC	Employers	03 Aug 2021	14:30	02:00	Freetown
F06	James Cobba	MoIC	Employers	03 Aug 2021	14:30	02:00	Freetown
F06	Sallie Mahoi		Employers	03 Aug 2021	14:30	02:00	Freetown
F06	Desmond Macfoy	NATCOM	Employers	03 Aug 2021	14:30	02:00	Freetown

ID	Name	Organisation	Stakeholder Role	Date	Time	Duration	Location
F07	Vafie Konneh	COMAHS	Students	03 Aug 2021	17:00	01:30	Freetown
F07	Ishmael IvanJalloh	COMAHS	Students	03 Aug 2021	17:00	01:30	Freetown
F07	Mohamed Marrah	COMAHS	Students	03 Aug 2021	17:00	01:30	Freetown
F07	Gracie Esther George	COMAHS	Students	03 Aug 2021	17:00	01:30	Freetown
F07	Isata Yeama Jembeh	COMAHS	Students	03 Aug 2021	17:00	01:30	Freetown
F07	Abdul Harold Kamara	COMAHS	Students	03 Aug 2021	17:00	01:30	Freetown
F08	Afanwi N. P. Dobgima	FBC	Students	03 Aug 2021	17:00	01:30	Freetown
F08	Rukiatu Fofanah	FBC	Students	03 Aug 2021	17:00	01:30	Freetown
F08	Kenneth A. Bamba	FBC	Students	03 Aug 2021	17:00	01:30	Freetown
F08	Sheku Tarawally	FBC	Students	03 Aug 2021	17:00	01:30	Freetown
F08	Amry V. A. Samuels	FBC	Students	03 Aug 2021	17:00	01:30	Freetown
F09	Santigie S. Kaba	UNIMAK	Faculty	04 Aug 2021	10:00	01:30	Freetown
F09	Edward J. Beah	UNIMAK	Faculty	04 Aug 2021	10:00	01:30	Freetown
F09	Momoh Conteh	UNIMAK	Faculty	04 Aug 2021	10:00	01:30	Freetown
F09	Jensen B.A. Cummings	UNIMAK/FTC	Faculty	04 Aug 2021	10:00	01:30	Freetown
F09	Zacheria J. Chebli	FTC	Faculty	04 Aug 2021	10:00	01:30	Freetown
F09	Alhaji Seray Jalloh	FTC	Faculty	04 Aug 2021	10:00	01:30	Freetown
F10	Sanpha Kallon	NU	Faculty	04 Aug 2021	10:00	01:30	Freetown
F10	Abdul Rahman Sesay	NU	Faculty	04 Aug 2021	10:00	01:30	Freetown
F10	Georgiana Allie	NU	Faculty	04 Aug 2021	10:00	01:30	Freetown
F10	Mohamed Allie Bah	NU	Faculty	04 Aug 2021	10:00	01:30	Freetown
F10	Alhaji I. Sankoh	MMCET	Faculty	04 Aug 2021	10:00	01:30	Freetown
F10	Max Kaimbay	MMCET	Faculty	04 Aug 2021	10:00	01:30	Freetown
F11	Fatmata Denton	ICASL	Employers	04 Aug 2021	14:30	01:30	Freetown
F11	Desmond E.A. Riddle	Life By Design	Employers	04 Aug 2021	14:30	01:30	Freetown
F11	Ibrahim Maxwell Kamara	SLCB	Employers	04 Aug 2021	14:30	01:30	Freetown
F11	Kain-John M. A. Stevens	NCTVA ()	Employers	04 Aug 2021	14:30	01:30	Freetown
F11	Victor Davies	Jui Baker Tilly	Employers	04 Aug 2021	14:30	01:30	Freetown
F12	Brima Babo	Mountain Lion	Employers	04 Aug 2021	14:30	01:30	Freetown
F12	Francis G. Kuyembeh	NaFFSL	Employers	04 Aug 2021	14:30	01:30	Freetown
F12	Chernor Kabia	SABI	Employers	04 Aug 2021	14:30	01:30	Freetown
F12	Donald O. T. Smart	Kabia Farm	Employers	04 Aug 2021	14:30	01:30	Freetown
F12	A.R. Conteh	SLARI	Employers	04 Aug 2021	14:30	01:30	Freetown
F13	Yao Aiahson Botton	NU	Students	06 Aug 2021	15:30	01:30	Zoom
F13	Isata Marah	NU	Students	06 Aug 2021	15:30	01:30	Zoom
F13	Unisa M. Essay	NU	Students	06 Aug 2021	15:30	01:30	Zoom
F13	Safiatu Conteh	NU	Students	06 Aug 2021	15:30	01:30	Zoom
F13	Idrissa A. Nyallay	NU	Students	06 Aug 2021	15:30	01:30	Zoom
F14	Lansana A.Y. Marrah	UNIMAK	Students	07 Aug 2021	11:00	01:00	Makeni
F14	Allieu Bobson Sesay	UNIMAK	Students	07 Aug 2021	11:00	01:00	Makeni
F14	Victoria Ejatu Conteh	UNIMAK	Students	07 Aug 2021	11:00	01:00	Makeni
F14	Veronica Cacan	UNIMAK	Students	07 Aug 2021	11:00	01:00	Makeni
F14	Franklyn Thomas Pratt	UNIMAK	Students	07 Aug 2021	11:00	01:00	Makeni
F15	Martha Thorpe	KCL	Project Mgt	06 Aug 2021	09:00	01:00	FBC
F15	Evvy Sesay	KCL	Project Mgt	06 Aug 2021	09:00	01:00	FBC
F15	Telly Jalloh	KCL	Project Mgt	06 Aug 2021	09:00	01:00	FBC
F16	Joeseph Turay	UNIMAK	Faculty	07 Aug 2021	12:00	01:00	Makeni
F16	George Gbamanja	UNIMAK	Faculty	07 Aug 2021	12:00	01:00	Makeni
F16	Augustine Foday Bangura	UNIMAK	Faculty	07 Aug 2021	12:00	01:00	Makeni
I01	Mohamed Bawoh	COMAHS	Faculty	01 Aug 2021	10:00	01:00	Zoom
I02	Ronnie Frazer-Williams	USL	Faculty / Mgt	02 Aug 2021	12:00	01:00	Freetown
I03	Hannah Lewis	KCL	Project Mgt	06 Aug 2021	14:00	01:00	FBC
I04	Badamasi Savage	USL-FBC	Faculty / Mgt	03 Aug 2021	13:00	01:00	Freetown
I05	Jonas Redwood-Sawyerr	PMB	Faculty / Mgt	05 Aug 2021	14:00	01:00	FBC
I06	Suzanne Thomas	KCL	Faculty / Mgt	05 Aug 2021	15:00	01:00	FBC
I07	Samuel Weekes	PMU	Project Mgt	05 Aug 2021	18:00	01:00	Freetown
I08	Fatou Taqi	50/50 Group	Partner	06 Aug 2021	10:00	01:00	FBC
I09	Eugene Conteh	Pharm Board	Partner	06 Aug 2021	11:30	01:00	Ph Board

4.3 Evaluation Team

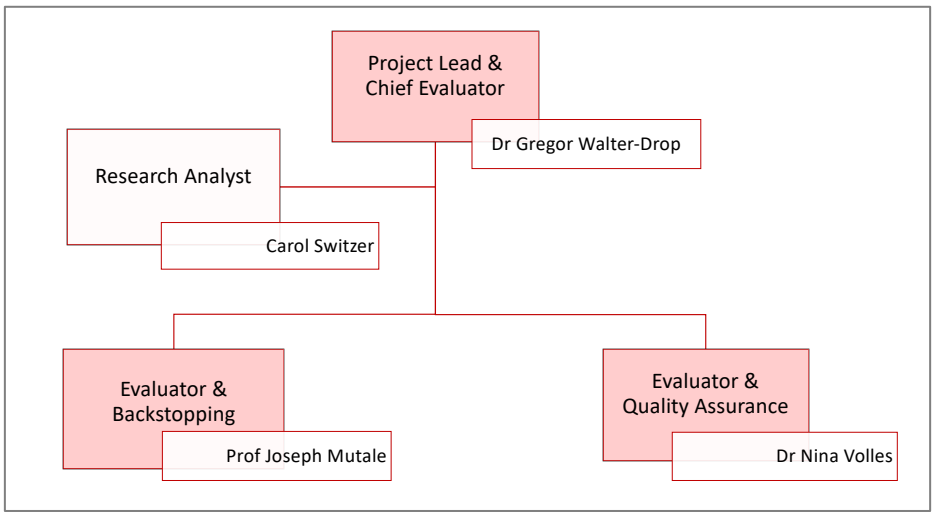

Figure 1: Paeradigms Project Team

The project team consisted of two experts supported by Technical and Administrative Backstopping as well as Data Analysis support as shown in Figure 1.

Dr Gregor Walter-Drop serves as **Project Lead and Chief Evaluator** for this assignment. He is the founding chairman of the Paeradigms NGO and a Senior Higher Education Advisor. A political scientist by training, he holds a doctorate in International Relations and has been working in different capacities at Freie Universität Berlin since 2006. Currently, he is the Director of the Knowledge Exchange Lab of the Cluster of Excellence "Contestations of the Liberal Script (SCRIPTS)". Gregor has published and taught primarily in the fields of globalisation, governance, development, and limited statehood. He has been involved in HE advisory work for almost a decade working on programme design and evaluation as well as curriculum design and review in both Sub Saharan and Northern Africa, covering a wide range of academic fields (from engineering to governance research). In 2019, he carried out the mid-term review of the process and substance of the SPHEIR project in Sierra Leone and therefore is familiar with the project. Gregor is a German national and speaks German, English, French, and Polish.

Dr Nina Volles Bird serves as **Evaluator and Quality Assurance Manager and Technical Backstopper** for this assignment. She is Managing Director of Paeradigms LLC and Senior Higher Education Advisor. A social scientist by training with a background in higher education management, international relations, and communications management, she worked for the GIZ, in higher education and in the private sector before co-founding Paeradigms. She has been involved in the design, implementation, monitoring, review, and quality assurance of a wide spectrum of higher education programmes in Africa, Europe, North America, and Asia. In 2019, she reviewed the curriculum reform process of the Kenya-Nottingham (KEN) SPHEIR project. Educated in Germany, France, the UK, and Switzerland, and of German-Iranian origin, she speaks English, French, German, Portuguese, Italian and Farsi and holds a Doctorate in Higher Education (University of Bath).

Prof Joseph Mutale is **Evaluator and Technical Backstopper,** Professor Emeritus (University of Manchester), and Senior Partner and Energy/Climate Change Lead at Paeradigms, with long-standing experience in programme development and curriculum review of degree programmes across Africa and beyond. Currently, he leads the portfolio review of the 34 post-graduate programmes of the African Union's Pan African University. As a subject-matter expert, he also supports the development of Centres of Excellence (World Bank) in Renewable Energy at three universities in Ghana and Nigeria. Due to his intensive engagement with industry and policymakers, he brings in-depth experience bridging the gap between academia, international governmental

and non-governmental organisations by creating strong partnerships between them. Joseph is a Zambian national and speaks English, Bemba and Shona.

Carol Switzer is the **Research Analyst and Administrative Backstopper**, Operations Lead at Paeradigms, and organises tactical support across all projects to ensure successful implementation of strategic project plans. She has a background in mathematics and information systems and is a process-oriented and strategic problem solver with experience across a variety of sectors, including academia, development, humanitarian operations, information technology, biotech, telecommunications, entertainment, banking, and manufacturing. She recently managed a research group at the Università della Svizzera italiana, guiding students and young scholars in research methods, data processing/cleaning/mining to support research objectives. She has designed and implemented IT systems, synthesised and integrated financial or other numerical data with text-based data for statistical analysis, examining records and documents to create evidenced-based support for interpretive analysis and reporting. She is a dual citizen of the US and Italy and holds a bachelor's degree in mathematics and an MBA.