

**A Problem-Based Learning (PBL) Expert Practitioners' Network
Formed by the AgriSCALE project**

**Concept Note for consideration by the
Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)**

**Prepared by AgriSCALE Partners
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AGRISCALE PROJECT

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1.0 Background of the AgriSCALE project

AgriSCALE is an acronym that stands for “Innovative learning and co-creation of teaching methodology for scaling entrepreneurship in food and agribusiness in Sub-Saharan Africa. The consortium of partner universities implementing the project comprises of a total of 9 universities; 3 from Europe, and 6 from three countries of Sub-Saharan Africa. The project partners from the 3 African countries include; Jomo Kenyatta University of Agriculture and Technology (JKUAT), and Egerton University (EGU) in Kenya; the University of Zambia (UNZA), and Mulungushi University (MU) in Zambia, Bishop Stuart University (BSU), and Gulu University (GU) in Uganda. The 3 partners from Europe include; Häme University of Applied Sciences (HAMK) as the project lead, and Aalto University both in Finland; and the University of Pavia (UNIPV) in Italy. More information about the project is shown in the Appendix-the AgriSCALE Brochure.

In Sub-Saharan Africa, young people constitute more than a third of the population, and the unemployment rate among the youth is high. While Higher Education Institutions (HEIs) struggle with growing enrolment, there is need to improve the quality of teachers, professional and experts and a need to update and improve the curricula of target HEI’s. In particular, Kenya, Uganda and Zambia have serious challenges in utilizing the agro-sector jobs and wealth creation potential in national development. While high quality HE is key to enhancing agricultural productivity and food security, boosting rural economies, and reducing rural-to-urban migration, the agro-graduates in these countries are not equipped with work-life relevant competences because they are not trained with modern pedagogical methods. A thriving economy would require a greater number of young people who are willing and able to become entrepreneurs. However, the HEIs of the target countries (KE, ZM, UG), do not offer adequate training nor tools for becoming an entrepreneur.

High quality HE is key to enhancing agricultural productivity and food security, boosting rural economies, and reducing rural-to-urban migration. One way of achieving high quality education is through Problem Based Learning (PBL). PBL is a powerful way to educate students in systems thinking and to equip them with 21st century relevant competences. AgriSCALE

therefore aims to create a new entrepreneurship learning ecosystem, which is based on PBL principles of student centred and competence-based education, collaboration and networking with industry and societal partners and sharing knowledge through a community of practice.

AgriSCALE is a three-year project being implemented between the years 2020 to 2023, and funded by the European Commission through the Erasmus+ program. The project, at inception, went through a needs analysis using a PBL competence survey, to establish the state of knowledge and practice of the PBL methodology in the partner universities; then conducted a PBL training for curriculum development, and supported student field work also known as student challenges. The project is expected to modernise the education of the agro-sector in SSA context in order to meet the requirements of the working life and to generate overall subjective wellbeing in personal, regional and national level; to guide the transformation of the current curricula in the partner institutions by paradigm shift using the PBL method and creating new courses and/or modernising the course offering; to develop teachers' and staff's educational and pedagogical competences to match the requirements of the PBL method; and to develop the educational structure and a sustainable learning ecosystem through student pilots/challenges with communities of practice and learning through real-life cases. Among the expected deliverables of the AgriSCALE project is the establishment of a PBL Expert Practitioners' Network.

2.0 Why establish a PBL Expert Practitioners' Network?

The PBL expert practitioners' network is being established as part of the outputs of the AgriSCALE project. This is to enable, particularly the southern partners of this project who have been trained to use the PBL methodology to share their expertise with other teachers of HEIs in Africa, and to build their capacity in utilising this methodology to enhance the teaching and learning of Agriculture on the continent. It is expected to be a support for the sustainability of the activities of the AgriSCALE project, among other things. So far, the partners have mobilised members from their respective universities to join the Network, and it appears that there is interest and willingness of staff in these universities to participate in the Network. The PBL Network is among other things, expected to:

- Help members to identify opportunities for professional growth,

- Provide them with a group of PBL and other experts in a particular field,
- Allow a member to gain helpful knowledge and advice
- Enable the sharing of instructional materials and resources,
- Share expertise through exchange programmes,
- Enable HEI collaboration on different projects
- Enable members to keep up to date with the latest trends in education, and to connect them to potential clients.

3.0 Objectives and activities of the PBL Expert Practitioners' Network.

3.1 Objectives

The objectives of the PBL Expert Practitioners' Network will be to;

- i. Bring together PBL practitioners in a forum that trains the PBL methodology to teachers in HEIs,
- ii. Conduct policy advocacy activities at national and regional levels for curriculum change towards PBL methodologies especially in Agriculture, and to develop learning materials,
- iii. Develop and improve PBL skill sets, enable members stay on top of the latest trends in PBL, meet prospective mentors, partners, and clients, and gain access to the necessary resources that will foster PBL development,
- iv. Enhance development of interactions with colleagues in the network regarding PBL teaching methodology and collaborative research,
- v. Foster the development of potential PBL mentors, upcoming PBL professional development opportunities, consultancy and research opportunities in PBL.

3.2 Activities

The main activities of the Network will be determined periodically by the PBL Steering Committee, but shall include among others;

- i. Expanding the existing body of knowledge by using PBL concepts, characteristics and benefits to pedagogy and andragogy in HEIs,
- ii. Integrating PBL methodology, techniques and resources at national and regional levels for curriculum change in agriculture,
- iii. Conducting trainings on PBL Assessment and evaluation approaches

- iv. Conducting PBL policy advocacy activities
- v. Building a network of human resource that will promote PBL activities to enhance Africa's agricultural productivity and competitiveness.
- vi. Conducting research and offering consultancy services on PBL related activities in Agriculture.
- vii. Conducting tracer studies on earlier cohorts of PBL training to determine their impact in practice.
- viii. Re-tooling PBL practitioners on emerging issues in the field for improved productivity and continuous improvement.
- ix. Compiling and maintaining a database for PBL experts.
- x. Offering support supervision to the PBL network members to improve knowledge and skills.
- xi. Organising seminars, conferences and debates among the PBL network.
- xii. Lobbying for funds to maintain the PBL network through activities like grant writing.

4.0 The role of RUFORUM in the PBL Network

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is a consortium of 157 African universities operating in 40 countries on the continent with a mission to: “Strengthen the capacities of Universities to foster innovations responsive to demands of smallholder farmers through the training of high quality researchers, the output of impact oriented research and the maintenance of collaborative working relations among researchers, farmers, national agricultural research institutions”. RUFORUM is owned and managed by Africans, and it allows for joint action by the member universities.

RUFORUM is engaged among other things, in professional development for academics at member universities by providing participants with opportunities to focus on their learning and teaching practice alongside developing their research/scholarship and leadership skills. University staff are re-engineered to provide quality teaching using pedagogical techniques that produce higher learning outcomes for students – to achieve a shift from subject-centred to student-centred learning; from passive to active learning; from memorisation to understanding and original thinking; from information and mental engagement to the development of the whole person; from academic and theoretical to life-centred knowledge; from fragmented to integrated knowledge; and from creating standardised products to fostering the development of resilience, individuality and creativity.

The AgriSCALE project partners from the 3 African countries i.e. Jomo Kenyatta University of Agriculture and Technology (JKUAT), and Egerton University (EGU) in Kenya; the University

of Zambia (UNZA), and Mulungushi University (MU) in Zambia, Bishop Stuart University (BSU), and Gulu University (GU) in Uganda are all members of RUFORUM.

The AgriSCALE project will end in September 2023. In order to ensure continuity of the PBL Expert Practitioners' Network at the end of the project, it was proposed that the established PBL network be handed over to RUFORUM for coordination, in addition to the other activities which they coordinate among partner institutions. Specifically, RUFORUM is expected to play the following roles;

- i. Review the PBL quality assurance framework, plans, tools, and strategies at national, regional and international level
- ii. support the production of records and materials necessary for regulation or compliance by local, state and national authorities
- iii. make policy recommendations on all matters of PBL
- iv. Oversee the implementation of PBL activities, policies and decisions
- v. Offer expertise in PBL within the community by making recommendations for the establishment PBL teams.
- vi. Advise and monitor PBL activities to ensure quality.
- vii. Provide technical and professional support in PBL activities
- viii. Supervise the PBL teams at all levels
- ix. Coordinate the conduct of PBL activities like system audits and conformity assessments by External Advisors and Assessors
- x. Develop operational procedures by defining, maintaining, and modifying on the existing PBL mainframe network.
- xi. Offer management for valuable PBL resources such as finances, PBL experts, and new knowledge built within networks and communities.
- xii. Creation of mechanisms for PBL knowledge transfer across and beyond networks.
- xiii. Organize periodic meetings among the PBL network members to assess and evaluate implementation of PBL in learning and other emerging issues.
- xiv. Participate in the sensitization, education and training of PBL
- xv. Provide IT and Library support where necessary

5.0 Membership to the PBL Network

The partner universities at their last meeting in Finland in September, 2022, proposed that membership to the PBL Network would preferably be at 2 levels; one at the level of the RUFORUM member universities, and secondly by individual members of faculty at the universities. Membership of the universities would require a subscription fee payable to RUFORUM, while at individual level, membership will initially be free of charge. The management of the network will consist of a committee selected from among the partner universities of RUFORUM

6.0 Indicators of achievement

Indicators of achievement (IAs) may be determined and revised by the PBL network steering committee. At this point, the committee suggests:

- i. Number of presentations at statutory meetings and workshops to raise the visibility of the PBL network,
- ii. Number of PBL workshops organized per biennium,
- iii. Number of PBL activities reported,
- iv. Number of PBL activities implemented, disaggregated by local, national and regional levels.

7.0 Risks

Low technical know-how regarding PBL in the partner countries poses risks, but this will be addressed through effective PBL training. Advocating for changes in policy direction to adapt PBL instruction strategies and investment can pose some risks too, but this will be mitigated through involving a broad range of stakeholders in the partner countries and effective communication.

8.0 Monitoring & Evaluation

The M&E approach of one of the partner institutions deemed sufficiently robust will be adopted, otherwise it will be done in accordance with RUFORUM practical guide for M&E. The log frame will fully be developed with indicators for outputs, outcomes, impacts and outreach, supported by theory of change. M&E will be conducted by the management team formed by the PBL network steering committee and results reviewed at regular meetings and annual workshops. This will highlight implementation issues and follow-up actions to be taken.

APPENDIX