

Introduction of Problem-Based Learning in KNUST, Ghana

Kwame Nkrumah University of Science and Technology, Kumasi

- The second public university in Ghana established in 1952;
- Premier public sector Science and Technology university in Ghana;
- Currently runs programmes in Arts and Humanities; (Social Science, Law, Business, etc.)
- Has student population of approx. 45,000 (undergraduate and postgraduate)
- Has staff strength of about 4,500, (3,600 are junior staff)

The Genesis

- The concept of PBL may not be new to our various institutions;
- Individual instructors maybe using aspects of it without being aware of it;
- Aalborg university has institutionalized it as a teaching model.
- This model has been replicated in many universities across the globe.

Origin of PBL in KNUST

- Towards the end of 2012, as part of BSU 1, KNUST received a small grant for sensitization of PBL and E-learning;
- The few familiar with PBL by virtue of their association with Aalborg;
- Internal discussions were held a couple of times to convince policy makers;
- A small steering committee of 5 was set up to draw the approach.

Take-off

- Strong links with Aalborg University.
- Briefing of Provosts, Deans and Heads of Departments;
- Roadmap for mainstreaming has been set at 2018;
- Two Training-of-Trainers workshops took place in 2013 with an expert from Aalborg;
- These workshop had staff across departments in the university;
- The library and some administrative staff were also allowed to participate for ease of mainstreaming.

Consolidation

- In 2014, Training of university staff internally began;
- Revision of existing course outlines to reflect PBL;
- New course designs are encouraged to be in PBL format;
- Intermittent visits by Aalborg export team to monitor internal activities;
- Practical roll-out of PBL content began in the 2015 Fall semester which is yet to end.

Achievements

- For now PBL is at the developmental stage in KNUST and remains a lecturers preference;
- About 120 academic have been trained and few others have started researching further on it;
- Full roll-out on pilot basis began in August 2015;
- PBL is to be officially included in the next Strategic Plan which is being formulated now;
- PBL has already been introduced to University Colleges affiliated to KNUST.

Success Factors

- The presence of an enthusiastic Chief Executive who wants it to happen;
- A committed and result-oriented Steering Committee;
- Involvement of University-wide leadership
- Collaboration and benchmarking with indigenous universities
- KNUST has a strong Center for Business Development that liaises with industries;
- Continuous relationship with Experts from Aalborg University
- Availability of related logistics and financial resources

Challenges

- The attitude of academics towards new approach towards teaching;
- Infrastructure: PBL leads to group activities and syndicate rooms for meetings; Some courses have very high number of students;
- The culture of industry seeing the universities as ivory tower;
- KNUST is using limited industries as part of the pilot, however, there will be the need to build consensus with the wider business associations;
- Lack of simulation and case studies to provide students with problem solving skills.

Way Forward

- The school of business for instance will from next year solicit for problems from industry for students to work on;
- KNUST is building a database of industries that we collaborate with across the university;
- KNUST is strengthening its internship programs that will expose students to industry problems;