Internationalization of Higher Education at Home: A Case Study of Institute of Petroleum Studies, University of Port Harcourt

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University of Port Harcourt
Internationalization of HEIs

- What does it mean?
- Internationalization, How? The Process
- Why internationalization?
- Benefits of Internationalization at Home driven by the oil and gas industry
Internationalization in

• Teaching and Learning
• Research/Publications
• Continuing Education
• Capacity Building: Conferences, Workshops, etc.
• Community Service.

TO MEET THE NEEDS OF THE OIL & GAS INDUSTRY
Proven oil reserve = 36 billion barrels
Proven gas reserve = 187 tcf
Production capacity > 3 million B/D
11th in World oil reserve
10th in World gas reserve
80% of Government revenue
95% of Nigerian foreign exchange

BUT IS IT WELL WITH OUR INDUSTRY?
Some Strategic National Objectives

1. Grow Oil Reserves (40 billion barrels)

2. Achieve Production Capacity (4.0 million b/d)

3. Achieve 70% NCD by 2013

But we need competent Geoscientists and Engineers to **discover, develop and produce** the reserves.
THE OIL INDUSTRY

- International
- requires well trained graduates
- able to work in international, multidisciplinary and multicultural Project teams
Skills Gap Challenges in Nigerian Universities

Poor Harvest of Graduates!
Poor Funding of Education in Nigeria

Countries % GNP budget for Education in 2001

- Angola: 4.9
- Côte d'Ivoire: 5
- Ghana: 4.4
- Kenya: 6.5
- Malawi: 5.4
- Mozambique: 4.1
- Nigeria: 0.76
- South Africa: 7.9
- Tanzania: 3.4
- Uganda: 2.6
2007 Survey Result on Status of Nigeria Graduates
Where we are today.

N = 33,238

Unemployed: 52%
Employed: 20%
Self Employed: 3%
NYSC: 3%
Housekeeper/Wife: 2%
Running A Business: 7%
Volunteering: 10%
Studying: 10%
Underemployed: 0%

Source: The Education Reform Process - 2007
2007 Survey Result on Status of Nigeria Graduates
Reason for Unemployment?

N = 33,238

Source: The Education Reform Process - 2007
Too Many People without Jobs; Too many jobs without people

The Big Crew Change!
SUMMARY OF CAUSES OF PROBLEMS

- No serious effort and institutions to train indigenous workforce to an acceptable international standard.
- Labor is too often “moved” around the world.
- Indigenous workforce lacks the knowledge and skill to undertake oil and gas operations as training budgets are not properly applied.
- Formal Education only provides about 30% of preparation over an individual's career.
Industry Reaction

- Award of Scholarships (But what of Learning Environment)
- Recruitment of 2.1 / 1st Class Graduates
- Recruitment from abroad
- Expatriate Quota/Globalization of Skills
- Intensive Retraining by Shell (SITP)
- Schlumberger Centre at UI
- Strategic partnership between an international institution and Nigerian University- Birth of Institute of Petroleum Studies (IPS) funded by NNPC/TOTAL JV
Internationalization of Higher Education

International Content in HEIs
- Foreign Students, Lecturers,
- External Examiners
- Research Cooperation, Collaboration
- Exchange & Linkage Programmes (staff & students)
- Brain drain
- Sabbaticals
- Visiting Scholars
- Funding from donor Agencies

Once upon a time in Nigeria

How it is now?
Process of Achieving Internationalization

- Academic Content Review/Standards.
- QA/QC in Programme Lifecycle from Admission to Graduation; Best Practices; ISO – Certification.
- Ranking/Rating – Globalization
- Language Programmes
- Competition for Resources
- Library Resources
- ICT Resources
- Laboratory Resources.
Projects

- Strategic Plan
- International Centre & Facilities
- Joint Degree Programme
- Institutional Structures: Restructuring
  - University Advancement; Exchange & Linkage
  - Support from Grant Making Agencies.
  - Support from Industry Affiliations; International Collaboration & Cooperation
Importance of Internationalization

- Profiling and branding/Exposure.
- Criterion for Ranking/Rating
- International Grants.
- Support by IOC, NIDO
- Solution to Brain Drain (Brain Gain).
- Intervention Programmes.
Challenges of Internationalization

- Policy Summersaults
- Funding
- Security Challenge
- Poor Infrastructure (Academic and Municipal)
- Instability in Government/Military Rule
- Brain Drain (abroad and industry)
- Globalization.
Internationalization at Home: Drivers/Need

- International Nature of Oil and Gas Industry
- Poor Harvest/Unemployable Graduates by Industry.
- High Cost of Retraining.
- Impact on Productivity/Profitability.
- Competition for resources by industry (Graduates/Market Share).
- NCD Policies.
Oil Industry Intervention

- SPDC’s SITP programme in Warri, PhD Research Fellows, Sabbaticals, Professorial Chairs
- Schlumberger Intervention in UI and donation of Software Packages to other Schools
- NNPC-Total JV Intervention
- IT Training, NYSC
IPS Case

- SWOT Analysis
- Negotiation with IFP School/NNPC-Total JV: Collaboration Model
- Governance Structure
- Constitution.
- Partitioning of Responsibilities.
- Funding
- Partnership with Professional Societies.
IPS Case contd.

- Curriculum Development
- Course allocation/Delivery – areas of strength.
- Equivalence: Credit System vs. ECTS
- Lecture Materials/Peer Review Mechanism.
- QA/QC
- International Certifications.
Challenges of International at Home

- Funding
- Effective Communication on Equivalence
- CSR Challenges/Community Pressures vs. Merit
- Differences in Academic Cultures – (Internationalization vs. Culture)
Role of International Agencies

- McArthur Foundation.
- International Certification Bodies (IWCF, NREP)
- NIDO
Benefits

- International Exposure to best practices, resources (human, grants, ICT, Library)
- High Intensity exposure to experts/lecturers.
- Ranking/Rating/Branding
- Centre of Excellence/Recognitions
- Highly qualified manpower for industry.
Measurable Outcomes

- Quality of employable graduates
  - Interview performance.
  - Job performance rating.
- International Certification Results.
- Publications in Conferences/Journals.
- International Lectures/Exposure e.g. Emmanuel Egbogah Legacy Lecture series.
Measurable Outcomes

- Annual Induction/Anniversary Ceremony.
- New Centres of Excellence and Collaborations.
- New Model for Development of higher education encouraging private-public sector cooperation.
- Capacity Building Programmes: International Conferences, Workshops, Journals and Publications.
<table>
<thead>
<tr>
<th>Location</th>
<th>Name of Higher Educational Institution</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Nat. Univ. du Benin</td>
<td>FLL Students to spend one year abroad</td>
</tr>
<tr>
<td></td>
<td>Cape Town</td>
<td>4 academic staff have visited: Medicine, Library, Education, Engineering</td>
</tr>
<tr>
<td></td>
<td>Natal</td>
<td>3 Academic Staff have visited: Medicine</td>
</tr>
<tr>
<td></td>
<td>Wits</td>
<td>2 Academic Staff have visited: Medicine, Engineering; Visitors from Wits to PH Nov. 2004</td>
</tr>
<tr>
<td></td>
<td>Pretoria</td>
<td>MOU signed; Combined Degree Programme in Engineering Management and others</td>
</tr>
<tr>
<td></td>
<td>NWU, Potchefstroom</td>
<td>MOU being prepared</td>
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## International Linkages and Collaborations

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<tr>
<th>Location</th>
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<tr>
<td>Europe</td>
<td>IFP School, France</td>
<td>Establishment of IPS: Award of Joint MSc Degree; First batch graduating Nov. 17, 2004</td>
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<tr>
<td></td>
<td>Sassari -Italy</td>
<td>Invitation and participation in Seminar/Workshop (Oct. 2000). Yet to be followed up.</td>
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<tr>
<td></td>
<td>CUTEC, Germany</td>
<td>MOU Signed</td>
</tr>
<tr>
<td>Asia</td>
<td>Japan</td>
<td>One Staff on doctorate programme: Mechanical Engineering</td>
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<tr>
<td>North America</td>
<td>Toronto</td>
<td>MOU Signed. Several two-way visits. Joint Proposal for HIV/AIDS</td>
</tr>
<tr>
<td>Pittsburg State</td>
<td></td>
<td>2 Students, 2 Staff currently in Pittsburg</td>
</tr>
<tr>
<td>Southern University System</td>
<td></td>
<td>NAFEO. NUC. Proposals submitted</td>
</tr>
<tr>
<td>Iowa</td>
<td></td>
<td>Several two-way visits. Setting up ICT Facilities</td>
</tr>
<tr>
<td>Louisiana State</td>
<td></td>
<td>MOU Signed</td>
</tr>
<tr>
<td>Others</td>
<td>West Indies</td>
<td>Proposals Submitted to FME</td>
</tr>
</tbody>
</table>
Birth of IPS, an International Collaborative operations-oriented Graduate School in Partnership with Industry (Petroleum Engineering Programme)

Internationalization at Home since 2003
Mission, Philosophy and Vision of IPS

- **Mission:** To meet the needs of the Petroleum Industry through a commitment to excellence in training, applied research, continuing education and capacity building.

- **Philosophy:** The institute believes in sustained learning, internationalism and professionalism; advancement and propagation of knowledge in the Petroleum Industry.

<table>
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<tr>
<th>Sectors</th>
<th>Centres of Excellence</th>
<th>Post-Graduate Programmes</th>
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<tbody>
<tr>
<td>Upstream</td>
<td>Petroleum Geosciences &amp; Reservoir Engineering</td>
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<tr>
<td></td>
<td>Oil &amp; Gas Technology</td>
<td>M. Sc. Pet Eng &amp; Project Development</td>
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<tr>
<td></td>
<td></td>
<td>PGD in Petroleum Technology</td>
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<tr>
<td></td>
<td></td>
<td>Gas Engineering (Sponsor: NNPC/TEPNG JV)</td>
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<tr>
<td></td>
<td>Offshore Technology</td>
<td>Offshore Engineering</td>
</tr>
<tr>
<td>Downstream</td>
<td>Refining &amp; Petrochemical Technology</td>
<td>Refining &amp; Petrochemical Engineering</td>
</tr>
<tr>
<td></td>
<td>Occupational Health, Safety &amp; Environment (HSE School)</td>
<td>Environmental Technology &amp; Management</td>
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<tr>
<td></td>
<td>Information &amp; Com. Tech.</td>
<td>ICT, Systems &amp; Software Eng</td>
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Structure of IPS

When in full Operation, Institute will be made up of Specialized Centres that will offer

- Operations-oriented post graduate programmes
- Continuing education programmes
- Applied research and services
- Capacity building programmes
- Community Service.
Existing Programmes

- M. Sc. in Petroleum Engineering and Project Development - for Engineering Graduates
- Post Graduate Diploma in Petroleum Technology - Bridging Programme sponsored for Science and Engineering Graduates in oil producing communities
- M.Sc. in Occupational Health and Safety.
- M.Sc. in Environmental Management and Technology
- M.Sc. in Petroleum Geosciences.
Software Development, Training & Certification

- Software Intensive Training
- Industry Standard Software
  - ✔ PETREL (Schlumberger Donation)
  - ✔ ECLIPSE
  - ✔ PERFORM
  - ✔ SAPHIR
  - ✔ GASWAT/OILWAT
  - ✔ EMERAUDE
  - ✔ Crystal Ball
  - ✔ HYSYS
- In-house Software Development
World Class Faculty Teaching Responsibility

Teaching Responsibilities

- IFP School: 40%
- Uniport: 40%
- Industry: 20%

Legend:
- IFP School
- Uniport
- Industry
Programme Life Cycle Quality Control and Quality Assurance

2. Admission Process
3. Selection of Lecturers
4. Course Materials/Software
5. Multimedia
6. Lecture Delivery
7. Course Evaluation
8. Release of Results
9. Evaluation of Lecturers
10. Handling of Results
11. Performance Benchmarks
12. Awards of Prizes
13. Outstanding Teachers
Employment Statistics as at November 2006
Commitment to Stakeholders

- Timely service delivery (Timetable/duration)
- Internationalization and global standards
- World class (faculty, course delivery, graduates..)
What is New?

- Conducive learning environment/Effective Quality Control
- Full access to Computer: One Student per PC/e-Library
- Modular course structure, Weekly Examinations
- International Degree, Equivalence between CGPA and European Credit Transfer System (ECTS); International joint Degree/NREP (HSE) Certification/Industry Software Competence Certificates
- Active Industry participation in Programme life cycle
- Exposure to High Intensity and Diversity of Lecturers/Mentorship
Admission Statistics

Universities whose Graduates are admitted:

- Uniport: 35%
- FUTO: 10%
- RSUST: 5%
- UNN: 10%
- FUTMinna: 5%
- Unilag: 5%
- UI: 5%
- NAU: 5%
- KNUG: 5%
- UAE: 5%
- Uniben: 5%

Engineering Disciplines:

- Pet. Eng: 25%
- Che. Eng: 10%
- E&E: 20%
- Mech. Eng: 10%
- Civil Eng: 5%
On graduation, I joined Schlumberger, it was easy to adapt to the pressure and fit into the organization. The Institute surpasses standards obtainable from Nigeria universities. Rita, Schlumberger, 2004 Valedictorian

“The training I got in IPS prepared me to perform in the industry without extra training. IPS is the best Petroleum training institute in Nigeria. It is extremely competitive” Inifie ExxonMobil.2006 Valedictorian

We went through tougher times that brought out the best in us”. Adi Koroye. T OTAL 2007 Valedictorian
Challenges

- Scholarship for Students
- Sponsorship of New Programmes/ Centres of Learning
- Sponsorship of Visiting Professors, Nigerians in Diaspora)/Industry Professors/Research Fellows
- Sponsorship of Capacity Building Programmes
- Sponsorship of Applied Research
- Employment Opportunities
Opportunities

- Strategic partnership with industry and multiplier effects
- Internationalization of higher education at home and cost savings
- IPS, training hub in the Gulf of Guinea
Benefits to Industry

- Guarantee Competent and Operations-ready Workforce
- Benefit from in-country Applied Research
- Benefit from in-country Continuing Education
- Save cost of re-training
- Reduce cost of Industry Studies e.g. Reservoir/Field Studies, EIAs
- Sustainable development!
Benefits to Nigeria

- Nigeria: Training Hub for Gulf of Guinea
- Internalization of Higher Education at home
- True Local Content and Capacity Building
- Sustainable national development
Benefits to Universities

- Save the Universities
- Stem the Brain Drain
- Improve Staff Motivation
- Improve Ranking
- Well equipped facilities
- Exposure to emerging Technologies and field operations
- Benefit from Industry Advisory Board
Africa like a Pistol, Nigeria the Trigger
Conclusions

- Sister Company/University Model
- Mutually beneficial Industry-University partnership
- Sustainable Quality Human Capital Development
- Sustainable national economic development
- TEPNG congratulated for innovative SD Policy and contribution to national development
THANK YOU

(If you are still awake)
Thank You