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STRONG INDUSTRY-ACADEMIA RELATIONSHIP: A TOOL TO IMPROVE THE QUALITY OF GEOSCIENCE EDUCATION IN NIGERIAN PUBLIC UNIVERSITIES

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Abstract
Time and again, geoscience graduates are being churned out of Nigerian universities, yet when job vacancies present themselves, employers of labor still find it challenging to recruit Nigerian graduates because they are often found unemployable. The acquisition of industry-based skills is not supported by the Nigerian geoscience education curriculum. Therefore, this paper examines geoscience students' exposure to geoscience facilities, participation in industry-oriented programs for undergraduates and the Strength of the industry-academia relationship. Literature reviews were carried out, after which a survey research design was adopted, which sought to assess students' industry-oriented programs. The sample comprises 150 final-year students from 31 Nigerian public universities offering geoscience courses in Nigeria and ten companies from different geoscience sectors. Data collected through an online questionnaire were qualitatively and systematically analyzed through an inductive approach. Although, the study reveals a weak relationship between the industry and academia, it highlights that a healthy industry-academia relation can improve the quality of geoscience education in Nigerian public universities.

Keywords
Industry-academia relationship, geoscience, quality education.

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INTRODUCTION

University education refers to the sum of general as well as specialized knowledge and skills that enables a university graduate to work in the industry or to conduct scientific research or scholarly work within the area of acquired specialized knowledge (The Great Soviet Encyclopedia, 1979). Olutola and Olatoye (2020) opined that universities contribute greatly to the advancement of quality education, level of development, and progress of any nation and the world as a whole. They also affirmed that the university education system is responsible for ensuring that the skills, understanding as well as values acquired by students are sufficient to make them employable. The Education and Employability Survey Report (2014) elaborated these skills to include life skills such as problem-solving and analytical skills, effective communication and literacy skills, and interpersonal and team skills.

According to Olutola and Olatoye (2020), quality education is a crucial part of improving individual's income level and economic growth for nations. It empowers students with skills and knowledge that ensures their relevance in the society (Olutola & Olatoye, 2020). Achi (2003) mentioned that higher academic standards, dynamic curricula, skilled and experienced teachers, updated textbooks, cutting-edge laboratories and computing facilities, small class sizes, modern buildings and conducive environment for learning are all measures of quality education.

REVIEW OF LITERATURE

Geoscience education is becoming important, "not only in developed and emerging economies, but even more important in continents like Africa where most of the areas are not explored, not mapped, and many of the potential natural resources are not known" (Martinez-Frias & Mogessie, 2012, p. 489). In terms of Environmental sustainability, geoscientists can contribute vital expertise in ensuring the continued existence of ecological

resources, biodiversity, safe drinking water, and resilience to hazards (Bralower et al., 2008; Critical needs for the twenty-first century: The role of the Geosciences, 2012). As a result, they are in a good position to provide information on "the air we breathe, the water we drink, the food we eat, the energy we use, the buildings in which we live and work, the materials we use in our daily lives" (Orion, 2019, p. 1), and the geoheritage that forms the foundation for tourism, both local and international (Orion, 2019). As Bralower et al. (2008) pointed out, geoscience is essential for understanding critical global threats in the coming century: water shortages (potable and otherwise), declining fossil fuel availability, coastal inundations, ecological collapse, and global warming. Adekoya (2021) described geology as an essential course for developing the country's natural resources. However, he lamented that in the public universities, there are not enough facilities to provide adequate training for undergraduates. Public universities are government owned universities. They are controlled and fully funded by either the Federal or State government (Bolupe, 2020).

Nabi (2003) referred to graduate employability as possessing a certain level of skills and attitudes and their ability to utilize them for job search and retention. The skills include problem-solving and communication skills, as well as analytical skills. These skills are considered necessary to help graduates not only to find jobs but also to achieve success in modern life. The modern labor market also emphasizes graduate employability, a term that appears to refer to the level of work readiness possessed by graduates to enable them to make a positive contribution to the achievement of organizational goals (Nabi, 2003). According to Roberts (2007), "too often, recent graduates find out that they are under-prepared for the 'real world' when they graduate, while the organizations who hire them complain that the new employees lack these critical professional skills" (p. 2).

Knowledge and research have a direct relationship with the market value of the products that result from them (Bosley, 1995).

Olayemi and Oluwatoyin (2018) found that “there is significant relative contributions of learning environment, school infrastructures and human resources to graduate's employability” (p. 68). At different forums, Nigerian university graduates have been challenged to demonstrate their suitability for a few available white-collar jobs (Oguntuase, 2013). According to Education and Employability Survey report (2014), “the current education system does not appear to be producing graduates with generic and essential skills, hence the continuous increase in the rate of youth unemployment” (p. 4).

Employers are “worried over the competency of the graduates that do apply for very limited job vacancies. They often complain that some of these graduates though professionally or technically qualified are unemployable, in that they lack the requisite, essential skills or competencies needed in the job or for sustainable employment. These skills create a gap in their knowledge which must be filled to make them suitable to compete for few, existing vacancies that crop up from time to time. They want the graduate recruits to be professionally competent in their chosen fields. They also want them to be equipped with complementary life skills such as problem solving, reflective and critical thinking interpersonal and teaming skills, effective communication character, integrity, self-esteem, self-discipline, organizing skills, leadership skills and the ability to translate ideas into action. The problem is that these skills are rarely taught in schools, and these are the gaps that are missing in a graduate’s ability to be gainfully employed even when the jobs are there” (Abe & Uduack, 2020, p. 46).

For decades, various communities of practice have contemplated, and challenged, the relationship between academia and industry. Some academics believe that "higher education has as one of its primary missions the acquisition and dissemination of knowledge as an end in itself [focusing] on acquiring knowledge, not necessarily on learning to use it” (Roberts, 2007, p. 2).

According to Education and Employability Survey report (2014), “62% of employers feel that the tertiary institutions in Nigeria are not doing a good job of producing successful graduate employees”. The Consulting and the Oil and Gas sectors, which reported the highest dissatisfaction rates, attributed their dissatisfaction to graduates' inability to work independently and their poor analytical and critical thinking skills. Even though the most employers (69%) believe collaboration with tertiary institutions is important, especially through internship programs, yet 52% of them have never partnered with tertiary institutions in curriculum development. Only about 15% of Nigerian employers participate in curriculum design frequently. In the curriculum development process, graduate employers and tertiary institutions did not appear to collaborate effectively (Education and Employability Survey Report, 2014).

Across the globe, earth science education has maintained the same low profile as it was during the previous century (Greco & Almberg, 2017; King, 2013; King, Orion & Thompson, 1995; Orion, Adams, King, & Krockover, 1999). Oloyede (2008) highlighted the challenges affecting the geoscience education in Nigeria. These challenges include lack of finance to fund the acquisition of equipment by the university leading to unavailability of necessary tools and basic equipment for study, inadequacy of the content of geoscience education to provide the required entry level cognate experience to Nigerian geoscience graduates, decay in facilities, high students’ enrolment, lack of centralized database for geological researches and publications, lack of access to ICT infrastructure and equipment as well as lack of uniform standard in the university.

Education and Employability Survey report (2004), suggested that the graduates’ skills which employers seem to be satisfied with, were probably obtained outside of their tertiary education. All the challenges affecting the quality of geoscience education in public universities cannot be tackled with only the funding from

the federal or state government. It is pertinent that the geoscience industries in Nigeria extend their corporate social responsibility towards the academia. Hence, the importance of the industry's involvement, which is the market for these graduates to craft the quality of graduates they need. Thus, the need for a healthy and robust geoscience industry-academia relationship in improving the quality of geoscience education in Nigerian public universities.

METHODOLOGY

In qualitative research, we aim to determine the patterns that emerge from attention to detail, documentation, and analysis. Quantitative proof of the causal nature of variables cannot be explored until these patterns are identified (Omona, 2013). It is the data that generate the theory in qualitative research (Eyisi, 2016). Therefore, both research methodologies were adopted.

Purpose of the Study

To highlight the importance of a solid industry-academia relationship in improving the quality of geoscience education in Nigerian public universities, this paper will carry out the following objectives:

1. Evaluate the percentage of the exposure of geoscience final year students to geoscience facilities and equipment.
2. Evaluate the rate of participation of final year geoscience students in student-oriented programs by the industry.
3. Evaluate the organization of student-oriented programs by the industry.
4. Provide insights into the opinions of final year geoscience students and geoscience employers about the relevance of a strong industry-academia relationship in producing competent geoscience graduates.

5. Identify the loopholes in the industry-academia relationship.
6. Discuss possible solutions.

Research Questions

This study aimed to answer the following questions:

1. How well exposed are the final year students to geoscientific equipment?
2. Do the students engage in field work up to 15 times throughout their 4 or 5 years of study?
3. What is the level of participation of the students in student-oriented programs organized by the industry?
4. What is the level of collaboration between the industry and academia through partnership research with students, internship opportunities for students, the establishment of workstations, and curriculum design for the students?
5. How satisfied is the industry with their newly employed Nigerian geoscience graduates?
6. Is there a need/desire to enhance the geoscience industry-academia relationship?

Variables

How well exposed are the final year students to geoscientific equipment?

To test the percentage of students' exposure to geoscientific equipment, their experience on the necessary equipment for a good geoscience study was surveyed. This equipment is used in the application of geoscience to solve a problem either in the academics or in the industry (Obafemi Awolowo University Geology Handbook, 2017). Therefore, the questionnaire sought to know whether the geoscience final year student had been exposed to the listed equipment that should be at their institution. The equipment include:

A. Microscope Laboratory
   - Petrographic (Leitz) microscope
   - Research microscope
   - Pocket Mirror Stereoscopes
   - Binocular microscopes

B. Geochemistry Laboratory
   - Atomic Absorption Spectrometer with Graphite Furnace
   - X-ray diffractometer
   - High temperature furnace
   - Flask shaker
   - Hot Box Oven
   - Distiller
   - Deionizer
   - pH meter
   - Dissolved Oxygen meter
   - Conductivity meter
   - Fume cupboard

C. Hydrogeology/Engineering Geology Laboratory
   - Hydrostat
   - Oven
   - Sample extruder
   - Sieve shaker
   - Linear Shrinkage mold
   - Permeability apparatus
   - Compaction mold
   - Compaction hammer
   - Water Absorption equipment
   - Andreasen pipette with stand
   - Penetrometer truck
   - Vacuum pump
   - Drying oven

D. Geology Workshop

- Rock cutting machine with Diamond cutting blade
- Grinding machine with Diamond impregnated grinding wheel
- Jaw crusher
- Pulverizer
- Hydraulic splitter
- Polishing machine

E. Geophysical Laboratory
- ABEM Terrameter LS
- ABEM SAS 300C Terrameter
- ABEM A.C Terrameter (Analoque)
- BISON 7000 Series
- Mc SEIS=SX Seismometer
- Proton Precession Magnetometer (GSM-8)
- FLUXGATE Magnetometer
- ENVI VLF
- GPR PULSE EKKO RRO
- WORDEN Gravity meter

F. Computer/ICT Laboratory
- Petrel software
- Geoframe software
- Geographix software
- Kingdom suite software

Methods

The purpose of this educational research is to improve educational programs. The objective of research is to discover the truth, which is why reasoning, interest, critical thinking, experiences, and expertise are combined with the objective of research. This is done for the purpose of finding solutions to problems confronting education through investigation and analyses. Research can be performed in many ways (Eyisi, 2016).

As a result of the wide geographical range of the survey participants, an online structured survey format was chosen. Online questionnaires were administered to only the final year geoscience students across the 31 public universities that offer geoscience courses. This online form was forwarded by a final year geoscience student to the WhatsApp group chat of each final year geoscience students in the sampled university. The final year geoscience students from each university who forwarded the form to his or her course mates was either the course representative or an executive member of the student chapter of any of the geoscience professional society.

The online questionnaire of the ten sampled companies was sent to the Human Resource Personnel of the companies who accepted to fill the form irrespective of the lock down due to the COVID-19 Pandemic.

Responses to the quantitative aspect of the survey were analyzed using a simple statistical analysis tool. The data received from the qualitative questions was analyzed using an inductive method. This involved identifying the major themes that evolved from the response and also adequately reflecting the data content.

It is important to note that only the final year geoscience students of Nigerian Federal and State universities were sampled. Some of the data gotten from the selected area of study include:

1. Number of geoscience final year students experienced with various geological equipment for geology students
2. Number of geoscience final year students experienced with various geophysical equipment for geophysics/applied geophysics students
3. Level of engagement in partnership research with the industry for both geology and geophysics/applied geophysics students
4. Number of students that interned in the geoscience industry for both geology/applied geophysics students

5. Number of times the students engaged in fieldwork for both geology and geophysics/applied geophysics students
6. The employers and the student's opinions about the necessity of a healthy industry-academia relationship in producing competent geoscience graduates.
7. The level of collaboration between the industry and academia concerning partnership research with students, internship opportunities, the establishment of workstations, and curriculum design for students.

Tools

1. Microsoft Excel: This was used to analyze the data generated from the responses.
2. Google forms: This was used to generate the questionnaire, which was distributed to the universities and geoscience companies in the study area
3. Questionnaire: The questionnaire was comprised of 50 questions designed to get the opinions of the students and companies concerning the relationship.

Participants of the Study

This survey was carried out in March 2020 using questionnaires that contained both quantitative and qualitative questions. The participants of the online structured survey were selected using a snow-ball non-probabilistic sampling method. The geoscience final year students were contacted through their course representative or professional association student chapter president. This survey was administered electronically to geoscience final year students and employers of geoscientific labor over a period of 3 weeks.

A total of 150 responses were received from geoscience final year students in 31 public universities out of 46 universities offering geoscience courses in Nigeria.

The population sample consists 19 out of 26 federal universities and 11 out of 20 state universities, respectively. The universities and the geoscience courses they offer include:

1. Ahmadu Bello University, Zaria: Geology
2. Federal University of Petroleum Resources, Effurun: Geology and Geophysics
3. Federal University of Technology, Akure: Applied Geology and Applied Geophysics
4. Federal University of Technology, Minna: Geology
5. Federal University of Technology, Owerri: Geology and Geophysics
6. Federal University, Laa, Nassarawa State: Geology
7. Federal University, Lokoja, Kogi state: Geology
8. Federal University, Ndifu-Alike, Ebonyi state: Geology and Geophysics
9. Modibbo Adama University of Technology, Yola: Geology
10. Nnamdi Azikiwe University, Awka: Geology and Applied Geophysics
11. Obafemi Awolowo University, Ile-Ife: Geology and Geophysics
12. University of Benin: Geology
13. University of Calabar: Geology
14. University of Ibadan: Geology
15. University of Ilorin: Geology
16. University of Jos: Geology and Mining
17. University of Lagos: Geology and Geophysics
18. University of Nigeria, Nsukka: Geology
19. Usman Danfodio University: Geology
20. Adekunle Ajasin University, Akungba: Geology and Geophysics
21. Akwa Ibom State University, Uyo: Geology
22. Ambrose Ali University, Ekpoma: Geophysics
23. Delta State University, Abraka: Geology
24. Ebonyi State University, Abakaliki: Geology

25. Enugu State University of Science and Technology, Enugu: Geology and Mining
26. Gombe State University, Gombe: Geology
27. Kano State University of Science and Technology, Wudil: Geology
28. Kwara State University, Illorin: Geology and Mineral Resources
29. Ladoke Akintola University of Technology, Ogbomoso: Earth Sciences
30. Niger Delta University, Yenagoa: Geology
31. Nasarawa State University, Keffi: Geology and Mining

In addition, responses were also received from 10 companies from different sectors of geoscience.

RESULTS

The Results are divided into two: (a) results from the final year geoscience students, and (b) results from the geoscience companies.

Results from the Students

A total of 150 responses were received from geoscience final year students in 31 universities out of 46 universities offering geoscience courses in public universities in Nigeria.

Rate of Exposure of Final Year Geoscience Students to Geoscientific Equipment

Mineralogy Laboratory. As seen in Figure 1, a higher percentage of the final year students had experience with the Petrographic (Leitz) Microscopes, Pocket Mirror Stereoscopes and Binocular Microscopes while a lower percentage had experience with the Research Microscopes.

Geochemistry Laboratory. As seen in Figure 2, a lower percentage of the final year students had experience with all the equipment in Geochemistry laboratory.

Hydrogeology and Engineering Geology Laboratory. As seen in Figure 3, a higher percentage of the final year students had experience with the drying oven, oven, and compaction hammer. The rest of the equipment had lower percentage of the final year students who had experience with them.

Geology Workshop. As seen in Figure 4, a lower percentage of the final year geology students had experience with all the equipment in the geology workshop.

Geophysical Laboratory. As seen in Figure 5, a higher percentage of the final year geophysics students had experience with the ABEM Terrameter, the rest of the equipment in the geophysical laboratory had a lower percentage of the final year geophysics students who experience with them.

Computer/ICT Laboratory. As seen in Figure 6, a lower percentage of the final year students of both geology and geophysics students had experience with all the software in the computer/ICT laboratory.

Frequency of Engagement in Field Work

As seen in Figure 7, a higher percentage of the geology final year students had gone for fieldwork up to 10 times and a lower percentage had gone for fieldwork for up to 15 times.

Participation in Student–Oriented Programs Organized by the Industry

As seen in Figure 8, a higher percentage of the final year students of both geology and geophysics had participated in an internship in a geoscience company. Also, a lower percentage of the students had engaged in partnership research with any geoscience company.

Interest in Strengthening the Industry–Academia Relationship

As seen in Figure 9, a higher percentage of the final year students of both the geology and geophysics agreed that a healthy industry-academia relationship is necessary to produce competent geoscience graduates in Nigeria.

Results from the Companies

As a result of the covid-19 pandemic shutdown, we could not reach out to a larger number of geoscience companies in Nigeria.

Organization of Student–Oriented Programs

As revealed in Figure 10, a higher percentage of the sampled companies had organized internship programs for undergraduate geoscience students. Also, a higher percentage of the sampled companies had engaged in partnership research with tertiary institutions. In addition, a lower percentage of the sampled companies had established workstation(s) for any tertiary institution. In same hands, the survey also revealed that a lower percentage of the sampled company had participated in the development of curriculum for tertiary institutions.

Satisfaction Rate of Geoscience Employers Towards their Newly Employed Graduates

As seen in Figure 11, companies from the oil and gas exploration and production, civil engineering and construction and groundwater exploration sectors had good satisfaction towards their newly employed graduates. On the other hand, companies from the Economic Geology and Geochemistry and the Academia had a poor satisfaction rate towards their newly employed graduates.

Interest in Strengthening the Industry–Academia Relationship

As seen in Figure 12, a higher percentage of the sampled companies agreed that a healthy industry-academia relationship is necessary to produce competent geoscience graduates in Nigeria.

DISCUSSIONS

From the survey research, the results seem to show that the percentage of the final year geoscience students who have gained experience with geoscience facilities and software is relatively low. This result agrees with Adekoya (2021) who lamented that there are not enough facilities to provide adequate training for undergraduate students. The few students who have gained experience with the geoscience facilities and software might have done so through the internship program or partnership research with the industry. According to the Education and Employability Survey report (2004), graduates' skills, which employers seem to be satisfied with, were probably acquired outside of tertiary education. Even though 75% of the geology final year students and 78.6% of the geophysics/applied geophysics final year student had undertaken an internship program in a geoscience program (Figure 8), the percentage of students who had gained experience with the geoscience facilities and software do not agree with that result. Does it mean that the internship programs offered by the industry do not afford adequate opportunities for geoscience undergraduate students to be exposed to geoscience facilities and software?

Furthermore, the percentage of the final year geoscience students who had gone for field work up to 15 times in their four or five-year program is only 22.90% which represents a poor percentage of the students. This finding does not agree with Obafemi Awolowo University Geology Handbook (2017) that fieldwork programs are the cornerstone of Geoscience programs. According to the Handbook, “about 15 weeks of fieldwork is planned for a four-

year geology program". The statistics from the result do not suggest that the 15 weeks of fieldwork for a four-year geology program is well implemented in the Nigerian public universities.

In addition, the results from the companies show that only 20% of the sampled companies had participated in curriculum development for tertiary institutions and established workstation (s) for tertiary institutions. This result agrees with the Education and Employability Survey Report (2014) which found that only about 15% of employers of labor in Nigeria have participated in curriculum design or graduate recruitment. Although 60% of the sampled companies had organized internship programs for undergraduate geoscience students, this study suggests that an increase in the involvement of geoscience employers in the curriculum design for tertiary institution will improve the curriculum and in turn the quality of geoscience education in public universities in Nigeria.

The poor exposure of the geology final year students to geochemistry facilities (Figure 1) appears to correlate with the low satisfaction rate of the Economic geology and geochemistry industry. This correlation certainly agrees with Olayemi and Oluwatoyin (2018) who found that infrastructure affects the quality of education which in turn affects the employability of the university graduates. Individual analysis of the answers from the sampled companies may suggest that companies who have a healthy relationship with the academia in terms of organizing student-oriented programs and establishing workstation(s) for the tertiary institutions, shows higher satisfaction towards their newly employed.

The study reveals that up to 90% of the final year geoscience students and the sampled geoscience employers agree that a stronger industry-academia relationship is necessary to improve the quality of geoscience education which will, in turn, produce competent geoscience graduates. This finding agrees with the Education and Employability Survey Report (2014), which revealed that up to 69% of employers believed that collaboration between the industry and tertiary institutions is important. Evans and

Spruce (2005) noted that in an applied subject such as Geoscience, the importance of industry collaboration has been recognized a long time ago.

Although the sample size of the geoscience companies is relatively small, the results from the survey do not differ significantly from other researchers' work. Hence, we can still rely on the achieved results to ascertain the state of the geoscience industry-academia relationship in Nigerian public universities. However, for future research purposes, we suggest a larger sample size for the geoscience companies for a better representation of the population. A larger sample size will also boost the confidence level for a stronger discussion and recommendation. We also suggest that correlation analysis could be carried out to ascertain the contribution of undergraduate students' industry-oriented programs and research to Nigerian geoscience graduates' competence and employability.

CONCLUSIONS

The value of a solid industry-academia relationship in improving the quality of geoscience education in Nigerian public universities cannot be overemphasized. It affords students ample opportunity to build the necessary professional and technical skills relevant to the labor market. This also aids the potential employees (students) in understanding the work environment, expectations, and challenges of the geoscience profession, making them work-ready.

This survey, in this manner, has carried out a qualitative survey of the quality of geoscience education in Nigerian public universities through the level of exposure of the geoscience final year students to geoscience facilities and software as well as their participation in industry-based programs for undergraduate students. The paper also evaluated the level of engagement of the geoscience industry in Nigeria with the undergraduate geoscience students in the Nigerian public universities.

Therefore, this paper recommends various ways to create a stronger industry-academia relationship, which will enhance the quality of geoscience education in Nigerian public universities. The recommendations include:

- Nigerian geoscience industries should increase internship opportunities for geoscience undergraduate students in Nigeria. They should also ensure that the internship programs offer maximum exposure of the interns to geoscience facilities and software.
- The Nigerian University Commission (NUC) should inculcate the industry into the curriculum development or involve the industry in the curriculum advisory board of the university to intensify practical-oriented geoscience education in the tertiary institutions.
- Guest lectureship and capstone courses should be introduced into the curriculum to identify gaps and opportunities for growth for the students.
- The industry should engage in partnership research with students to boost their critical thinking and analytical skills, which are one of the top three required skills.
- Industries should assist the universities in organizing field courses to ensure that the *15–Week of Field Work* for a four-year geoscience program is implemented in Nigerian public universities.

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FIGURES

Figure 1

Rate of exposure of geology final year students to equipment in Minerology Laboratory

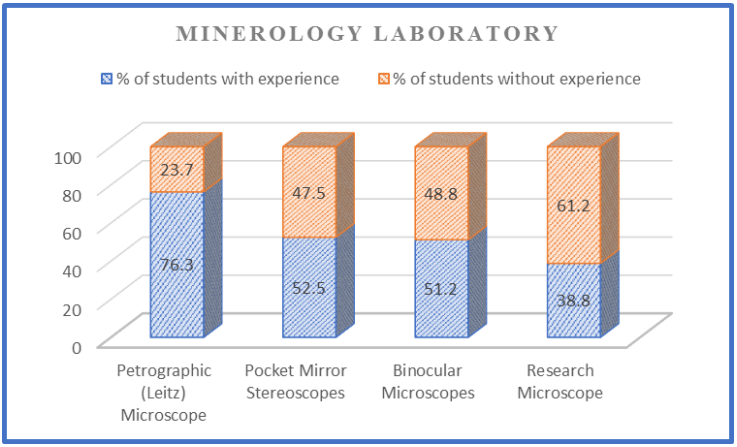

Figure 2

Rate of exposure of final year geology students to equipment in Geochemistry laboratory

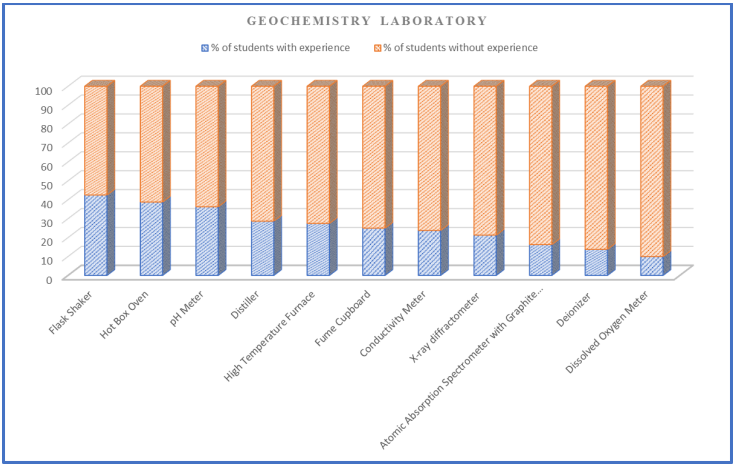

Figure 3

Rate of exposure of final year geology students to equipment in Hydrogeology/Engineering Geology laboratory

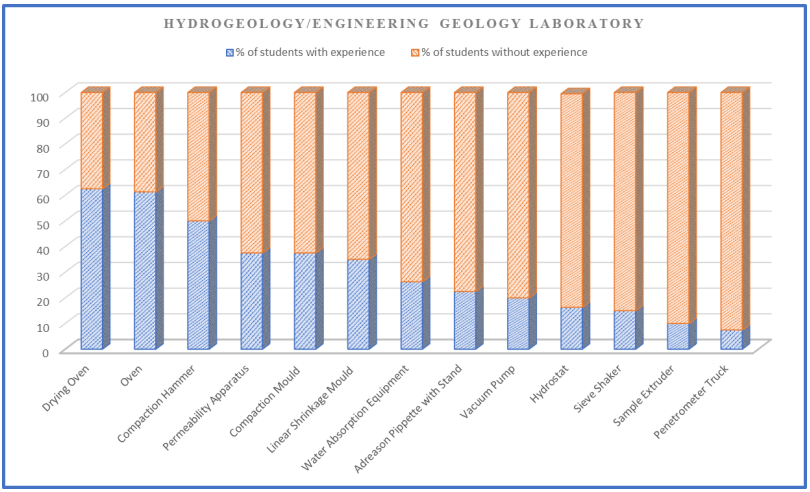

Figure 4

Rate of exposure of final year geology students to equipment in the Geology workshop

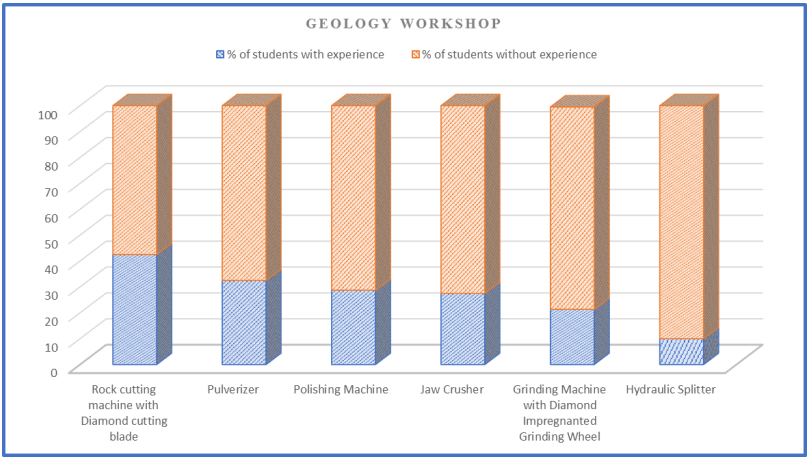

Figure 5

Rate of exposure of final year geophysics students to equipment in Geophysical laboratory

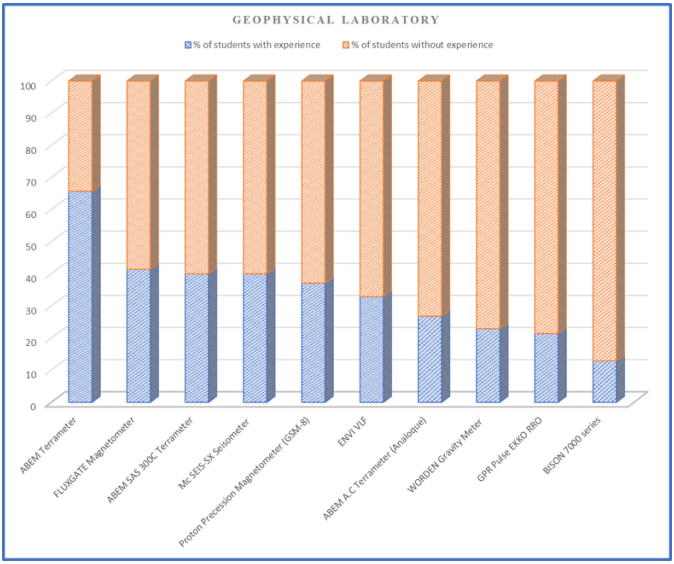

Figure 6

Rate of exposure of the final students of geology and geophysics to software in ICT laboratory

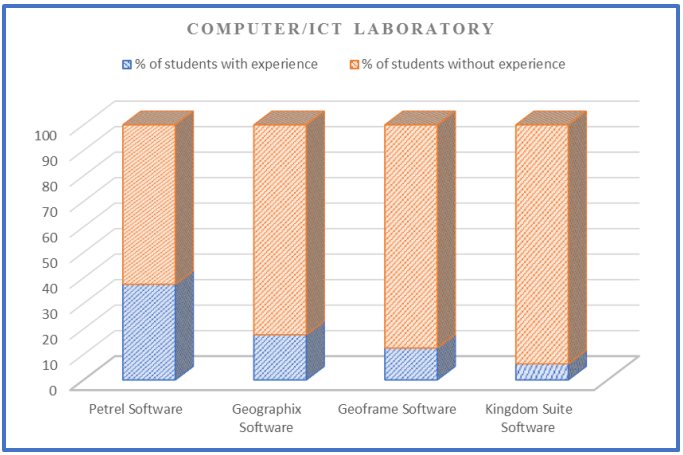

Figure 7

Frequency of engagement of the final year students of geology and geophysics in field work

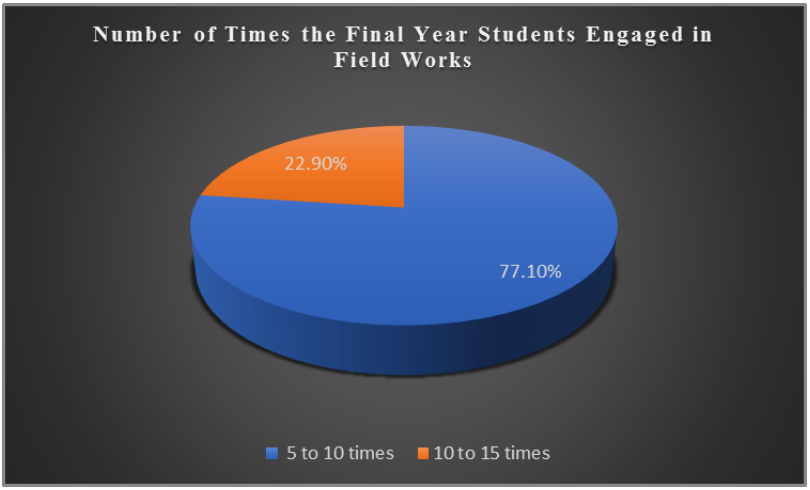

Figure 8

Participation of final year geology and geophysics students in student-oriented programs by industry

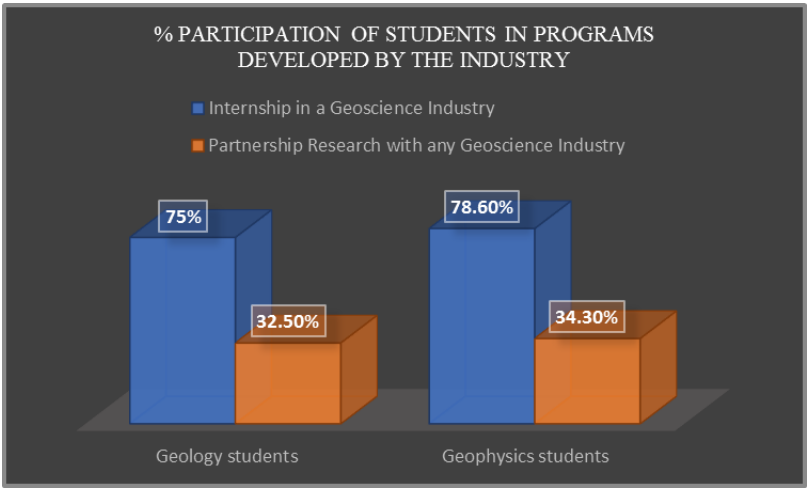

Figure 9

Interest in building a healthy industry-academia by final year geology and geophysics students

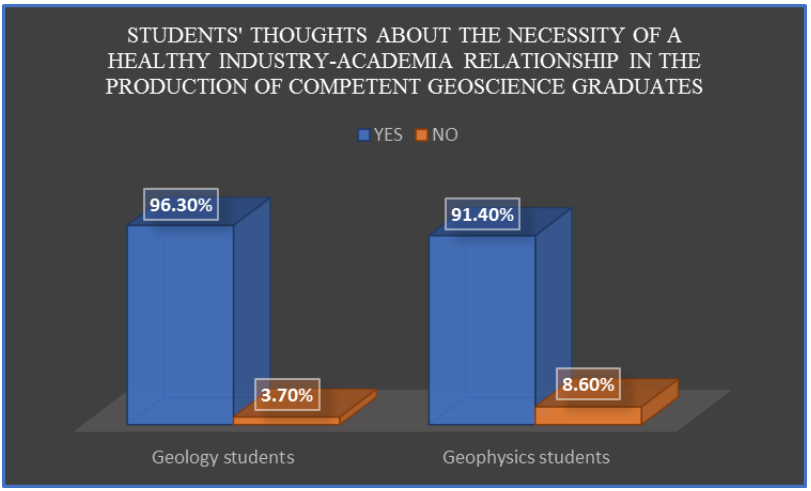

Figure 10

Organization of undergraduate student-oriented programs by the sampled companies

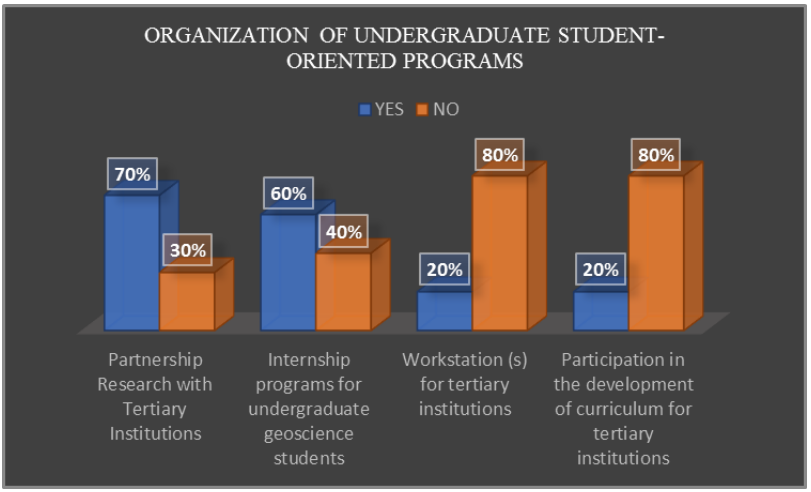

Figure 11

Satisfaction rate of geoscience employers at their newly employed graduates

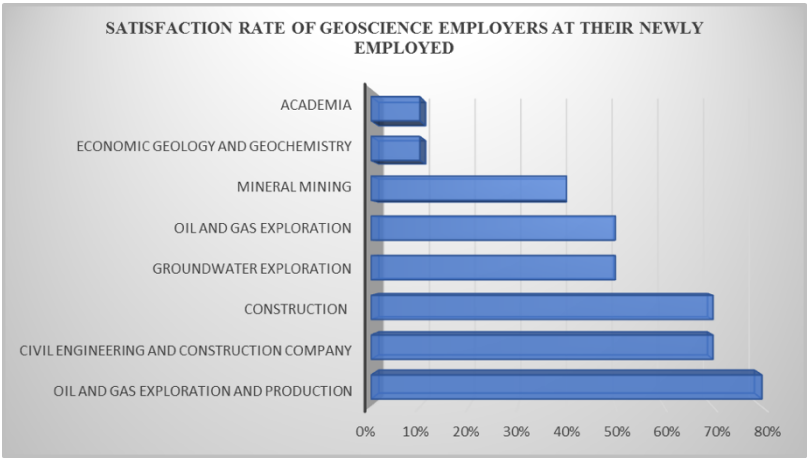

Figure 12

Interest in building a healthy industry-academia relationship by the sampled companies