



AN ASSESSMENT OF THE LEVEL OF COLLABORATION BETWEEN PRINT-BASED INDUSTRY AND PUBLIC UNIVERSITIES IN NIGERIA.

MAXWELL E. ROBERTS; IBRAHIM F. CHRISTOPHER; & IBRAHIM SULEIMAN UBAM

Department of Arts & Industrial Design Federal Polytechnic, Nasarawa, Nasarawa State.

Abstract

The study is established on the assessment of the level of collaboration between Print-based graphic design industry and public universities in Nigeria, as it intends to encourage productive knowledge acquisition after graduation by the students of Graphic Design. The right machines and equipment should be provided by the Universities authority, in the 21th century, design schools should be equipped in preparation for inclusive participation in the Nigerian Print industry. The following objectives were considered. (i) Assess the level of collaboration between Print-based industry and public Universities in Nigeria. (ii) compare the teaching facilities in Nigerian universities and those of the print-based industry. Descriptive survey method and percentage analysis were employed for the study, Primary data was gathered from 4 federal universities; Ahmadu Bello University, Zaria; Abubakar Tafawa Balewa University, Bauchi; Federal University of Technology, Akure and Modibbo Adama University of Technology, Yola and from eight graphic design companies; two from each location. Findings from the study show that the Print Based industry has more state-of-the-art-printing facilities, as such; graduates need re-training/internship programme to be able to function properly in the print-based graphic design industry. The level of collaboration between print-based graphic design industry and public universities in Nigerian is important but does not exist. Recommendations are, (i) to create mechanism that will foster the relationship between university and industry which will help to impart relevant knowledge and will

be sustainable in the changing conditions. (ii) University management should initiate ways of sourcing fund for the acquisition of machines and equipment, for better quality of graduates.

Keywords: *Print based, graphic design, machines, equipment, public universities*

Introduction

A look at the situation in Nigeria's education system gives a sharp contrast to the pattern of innovative responses to change seen in the global platform. The gradual trend in information technology which has opened up various challenges in the practice of design most especially the training pattern of designers requires the need to adequately integrate designer's skills and knowledge with the current trends of technology (Hollis, 1994 and Dwiggin, 1999). A survey of the state of printing education by some researcher concluded that "the printing industry in Nigeria, in line with global trends, is passing through a phase of transformation that is driven by digital technologies. Expectedly, there has been an emergence of new business models. Therefore, the print media industry has witnessed the expansion of traditional printing industry. Consequently, there is an urgent need to ensure that training opportunities in Nigeria's graphic design schools meet up with industry needs." (Afolabi, 2014).

Drucker (1997) cited in Marmolejo (2007) helped us to recognize that while higher education is becoming a dynamic, global enterprise, the strategic management of higher education facilities is becoming increasingly complex. He astonished many in 1997 when he suggested that "universities won't survive" and argued that "today's (university) buildings are hopelessly unsuited and totally unneeded" Drucker was perhaps exaggerating with this prediction since universities are still around and continue to grow.

Graphic Design Facilities in Universities

Not surprisingly, in a recent study conducted, an increasing number of higher education leaders identify the challenges associated with "aging and expanding facilities" as one of the top change drivers in the field, exceeded only by insufficient financial resources, technological change and changing

student demographics. In the same report, “insufficient facilities” are also considered among the top threats to the success of higher education. The study concludes with a call to action and the recognition that leadership is “a key ingredient that will ensure higher education’s future success and help mitigate its threats” (Marmolejo, 2007).

Adewumi (2002) holds that, some available design facilities found in some public universities in Nigeria meant for design problem solving have become obsolete for teaching and learning. Hence there is need, for a Paradigm Shift the move to align Nigeria's education system with global standards which includes collaboration between graphic design departments of the public universities and the print-based design industry, will naturally lead to the extension of frontiers.

TVET (2007) further confirms this assertion by maintaining that vocational education and training alone does not provide jobs or eradicate poverty. Good government policies do both. In harmonizing both statements, an argument can be raised that governments should create an economic environment that promotes the growth of enterprises and generally stimulates the economy. When businesses develop and expand, additional labour-market demand for university graduate will emerge, new job opportunities are created, more people get employed, and the incidence of poverty reduces. For this to happen on a sustainable basis, however, the graduate must be labour-market relevant, equitable, efficient, and of high quality. Can the present graphic design facilities in public universities provide the framework for the implementation of such?

Similarly, the poor conditions of the physical infrastructure in tertiary institutions in Nigeria were vividly captured in the report of the Needs Assessment Committee, and Othman (2016) identified some physical infrastructure for teaching and learning as follows; Lecture Theatres/Auditoria, Classrooms, Laboratories Workshops/Studios, Libraries and staff Offices. The learning resources were identified as laboratory equipment and consumables, ICT facilities and services, books, journals and periodicals, machines and other research equipment. Othman puts it that,

A committee was set up by the Federal Government to assess needs of Nigerian public Universities as part of agreement between the government and the Academic Staff Union of Universities (ASUU) for the union to suspend

its industrial action in 2013. The committee includes representative of all the stakeholders and was composed of individuals with high level of integrity in the society.

Othman (Ibid) holds that the committee's assignment covered 61 public Universities across the country (27 Federal owned universities and 34 state owned) at the time when there were a total of 74 public universities in the country. The committee reported that physical facilities for teaching and learning in Nigerian Universities were inadequate; they were being used beyond the original carrying capacity. Most of the workshops/studios were poorly furnished and equipped and were overstretched or overcrowded. The committee further found out that basic learning resources were unavailable or in short supply. The committee provided proof to support their assessment. For instance, less than 20 percent of the universities used Interactive Boards; even the ones that used such Boards were using them in less than 10 percent of their lecture rooms/ theatres. Internet services were almost non-existent in some universities, or epileptic and very slow when accessing. No university library was found to be fully automated while 35 percent of the libraries were partially automated. Othman concluded that consequently, three years after this report and release of the fund, the situation has not changed significantly in most of the universities.

The prominence of facilities in the realization of educational objectives and development of required workforce for the 21st century has been a dominant issue for researcher in recent time. This is premised on the fact that availability may most often than not lead to integration (Jude and Dankaro, 2012). The apparent lack of facilities and resources in the institutions has led to lack of motivation for integration of same in instructional delivery (Ekukinam, 2002). Having seen the nature of teaching facilities in the public universities the need for collaboration between the universities and print based design industry is of the essence.

Relationship between University and Industry

As Hoy and Miskel reason, "Because school organisations are conceptualized as part of a larger environment, an argument can be made that anything that happens in the larger environment may affect the school and vice versa" (Hoy and Miskel, 1996). In other words, it has been recognised that the teaching

and learning which occurs within an institution have a dynamic impact on the larger environment in which the institution resides. Likewise, the dynamics of the larger environment impacts both on institution and the teaching and learning which occurs within that institution.

Following World War II, attempts to define organisational behaviour through interactions between the organisation and the environment emerged as a collection of ideas collectively known as open systems theories (Scott, 1998). Unlike closed system theories which attempt to define organisational structure and processes solely within the context of the organisation, open system frameworks attempt to define organisational behaviour through an examination of the organisation and the environment in which it resides (Scott, 1998). In open systems theories, organisations are perceived as being embedded in an environment, and import resources from the environment to export products and services to the environment. In drawing a conclusion with regard to schools as open systems, Hoy and Miskel argue that “the larger social, cultural, economic, demographic, political, and technological trends all influence the internal operations of schools. This is because school organisations are conceptualised as part of a larger environment. An argument can therefore be made that anything that happens in the larger environment may affect the school and vice versa”.

Among the different theoretical frameworks for open systems is the Resource Dependency Theory. The main premise of this theory is that no organisation is totally self-sufficient and must engage in exchanges within the external environment for necessary resources. The flow or exchange of resources creates dependencies and power differentials between organisations and the environments in which they reside. These power differentials have restraining effects on an organisation’s actions (Johnson, 1996). There is never a time when this is more evident in an educational setting as when a school faces a notable shift in emphasis in terms of curriculum and aims, leaving a deficit on professional and industry skills, which will be blamed on a lack of interaction between Print-Based industry and Universities.

Today, businesses are looking for innovative solutions from the universities to help meet their business needs of higher productivity and lower costs, yet increase efficiencies. In the area of talent, technical and management resources have to be strengthening as these are crucial to knowledge-based

industries. A market-driven approach to higher education has to be fostered in order to encourage manpower development from the grassroot level. The idea is to involve the private sector in higher education (Raver, 2012). We have witnessed a lot of technological changes. These changes; however, have not been properly used by our graduates in order to compete in the present scenario. It is essential to have industry-university interactions which will help to impart relevant knowledge and will be sustainable in the changing conditions. Industry and university have been at odds with each other for decades, with industry accusing university of being out of touch with reality and university accusing industry of being only after the money (Halina, 2012). It is important to engage rather than avoid corporate sectors in the field of education just as we engage government notwithstanding all the corruption charges against it. Yet most of academicians choose to engage it, they choose to be in their committees so that their voice is represented and they could influence its activities and policies positively. The same principle need to be applied while engaging corporate sector in the field of education. Projects carried out in collaboration with industry do not only provide finance but also have a positive effect on the performance of academicians in academic publications and in the number of patents granted (Kaymaz and Eryigit, 2011) Pricewaterhousecooper observes that;

Another crucial factor is that there is insufficient interface and interaction between educators of designer and employers of designers, regarding such areas as graduate in-take requirement; the appropriateness of course content to meet the changing needs of industry; student support and work placement; job placements etc. Criticism of design education relates to course content and scope, especially that many courses do not adequately reflect the needs of industry, and that greater emphasis needs to be placed on innovation and creativity in design, marketing skills, communication and strategic planning skills. (Pricewaterhousecooper & Enterprise Ireland, 1999:13)

With the lack of complimentary industry related skills that universities are faced with and the over production of design graduates, Woods (2007) stress a need for industry placement for real life experience, team and key skills and to broaden conceptual thinking in design education with an emphasis on the finished and technical aspects of the professional practice. This is in addition to contextual studies which have been an obligatory aspect of design

undergraduate studies for the last few decades; namely psychology, philosophy, sociology, law, language and history of art and design when it moved from being a craft based vocational area to a common liberal arts subject.

Design management is also noted as area which warrants more attention, particularly within the context of degree and post-graduate courses. This is a field which will be in increasing demand in the future, as companies seek to engage professional design managers to manage all of their needs. While most design courses have some business-related subjects the need for students to further develop their business/commercial/ entrepreneurial skills within the context of a design course was emphasised. Increasingly, employers are seeking designers with sound commercial nous who can hit the ground running from a very early stage. (pricewaterhousecooper & Enterprise Ireland, 1999:92-93)

The debate centres around what should a design teaching and learning consists of and who should be the decision makers? On the basis of this report, both industry and education see the educational process as production for industry.

An effective and coherent interface between establishments... is an area of considerable frustration for design educationalists, who are mindful of their responsibility in turning out design graduates whose skills are in keeping with the needs of industry, but currently have no mechanism to foster such a relationship. (pricewaterhousecooper & Enterprise Ireland, 1999:91)

Designers study Gestalt and lateral thinking to foster creativity, research skills in order to create ideas. Grounding in history for the same reason, or as Manfredo taufuri put it “we are obliged to see history not as a great tank of codified values, but as an enormous collection of failed utopias, failures and betrayals” (baljon, 2002). Critical analysis of historical work also teaches practitioners to be more critical and aware of their own design processes. It is

not difficult to say that designers should be up to date on software and technological practices.

METHODOLOGY

Methods and procedures that were utilized in the collection of the data for this study are presented as follows; selection of the population for the study; description of the instrument; procedures for the collection and the statistical analysis of data. The research design employed for this study is survey methodology which examines a sample from a population.

The population of this study comprises of all Nigerian public universities that offer graphic design as a course as provided by the Joint Admission Matriculation Board (JAMB) brochure 2018 and selected printing establishment in Nigeria. The subjects include graduating students of Graphic design, print based company's supervisor and equipment/machines.

The Sampling Technique employed for this study is non-probability sampling, whereby the researcher selected numbers of objects that poses feature of interest from a given population to form part of the sample.

For this study therefore, Federal universities that have Industrial Design as a department were chosen as samples to be considered. They are Ahmadu Bello University, Zaria; Abubakar Tafawa Balewa University, Bauchi; Federal University of Technology, Akure and Federal University of Technology, Yola, The instruments used to collect data for the study were as follows; questionnaires, observation, oral interview and camera to obtain information. Data was obtained using questionnaires, camera and personal interview from respondents. Structured likert-scale questionnaires were designed by the researcher to elicit information of the participants for the purpose of the study. The camera was used to take photographs of the print-based facilities in both the universities and the print-based design industries.

Procedure for Data Analysis

The data was analysed using both quantitative and qualitative analysis. Quantitative data was discussed with the help of Likert-type five point scales. A direct questionnaire was adopted for interpretation of findings. A total number of sixty copies of questionnaire were administered to final year Graphic Design students of some selected Nigeria Universities and fifty were

retrieved for assessment. At the Abubakar Tafawa Balewa University Bauchi, the final year students were six in number the researcher personally administered questionnaires to the six students and collected all of the six questionnaires. At the Ahmadu Bello University Zaria, the final year students were twenty in numbers, of which five of the students were used for the pilot study of this thesis. The researcher personally administered and collected fifteen questionnaires from the students. At the Federal University of Technology Akure, the final year students were thirty-three the researcher administered thirty-three questionnaires and collected twenty-four. At the Modibbo Adama University of Technology Yola, the final students were six the researcher administered six copies of questionnaire.

Two print-based graphic design industries were considered from each of the states where these design schools are located; In Bauchi, ATBU ATIL printing Press and Ramadan Press; Excell Global printers Ltd and Unique – Ace Integrated Ltd in Kaduna; in Akure Flamingos Digital Prints and Signal 7000 lastly in Yola ABTI Press and Microtrend Digital Prints graphic design graduate staff, supervisors or directors were interviewed orally by the researcher as a result of their limited number.

Qualitative data was analysed using frequency distribution and percentage. Information and the results will be discussed and findings outlined. The data will be treated in tables.

Table 4.8 Respondents response to the availability, adequacy and relevancy of Print-Based facilities in public universities.

From the table above, reveals that majority of the respondents agree that graduates of Nigerian public universities are not well trained to fit into the production line on graduation

Analysis of Student’s Questionnaire

Table 4.9 Distribution of Respondents by Institution

<i>Name of Institution</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>Abubakar Tafawa Balewa University, Bauchi.</i>	6	12.0	12.0	12.0
<i>Ahmadu Bello University, Zaria.</i>	15	30.0	30.0	42.0
<i>Federal University of Technology, Akure.</i>	24	48.0	48.0	90.0

Modibbo Adama University of Tech., Yola.

Total

5	10.0	10.0	100.0
50	100.0	100.0	

From the table above, 24(48%) of the respondents were from Federal University of Technology, Akure, 15(30%) were from Ahmadu Bello University, Zaria while 6(12%) were from Abubakar Tafawa Balewa University, Bauchi and 5(10%) of the respondents were from and Modibbo Adama Federal University of Technology, Yola. This reveals that Federal University of Technology, Akure, had more numbers respondents among students.

Table 4.10 Distribution of Respondents by Gender

Sex	Frequency	(%)	Valid (%)	Cumulative (%)
<i>Male</i>	41	82.0	82.0	82.0
<i>Female</i>	9	18.0	18.0	100.0
Total	50	100.0	100.0	

From the table above,41(82%) of the respondents were male while 9(18%) of the respondents were female. This shows that there were more male than female respondents.

Table 4.11 Distribution of Respondents by Age

Age Range	Frequency	(%)	Valid (%)	Cumulative (%)
<i>15-19 Years</i>	1	2.0	2.0	2.0
<i>20-24 Years</i>	24	48.0	48.0	50.0
<i>25-29 Years</i>	22	44.0	44.0	94.0
<i>30 and above Years</i>	3	6.0	6.0	100.0
Total	50	100.0	100.0	

From the table above, 24(48%) fell within the age of 20 to 24 years and 22(44%) fell within the age of 25 to 29 years, while 3(6%) fell within the age of 30 and above and 1(2%) fell within the age 15to 19years. The table reveals that most of the respondents fell within the age of 20 to 24 years.

Table 4.12 Distribution of Respondents by Marital Status

<i>Status</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>Married</i>	3	6.0	6.0	6.0
<i>Single</i>	47	94.0	94.0	100.0
<i>Total</i>	50	100.0	100.0	

From the table above, 47(94%) of the respondents were single while 3(6%) were married. This shows that there were more single respondents.

Table 4.13 Distribution of Respondents by Highest Educational Qualification

<i>Qualification</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>WAEC</i>	37	74.0	74.0	74.0
<i>OND</i>	3	6.0	6.0	80.0
<i>HND</i>	3	6.0	6.0	86.0
<i>NCE</i>	7	14.0	14.0	100.0
<i>Total</i>	50	100.0	100.0	

From the table above, 37(74%) of the respondents fell within those with O'level WAEC Certificates and 7(14%) fell within those with an NCE, while 3(6%) fell within those with OND and HND respectively. This reveals that most of the respondents fell within those with WAEC.

Table 4.14 Distribution of Respondents by Years of Course in University

<i>Duration</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>4 Years</i>	15	30.0	30.0	30.0
<i>5 Years</i>	35	70.0	70.0	100.0
<i>Total</i>	50	100.0	100.0	

From the table above, 34(70%) of the respondents fell within those whose course duration were 5 years and 15(30%) fell within those whose course duration were 4 years. This reveals that most of the respondents fell within those whose course duration were 5 years.

Table 4.15 Respondents response to the availability, adequacy and relevance of print based facilities in public universities.

		SA		A		D		SD		U	
		F	%	F	%	F	%	F	%	F	%
1	My institution has sufficient equipment to support a developmentally oriented curriculum.	2	4.0	7	14.0	23	46.0	16	32.0	2	4.0
2	The print-based graphic design is a vital aspect of my developmental process as a graphic designer.	32	64.0	17	34.0	0	0	0	0	1	2.0
3	The print-based design facilities in my institution meet the needs of students.	0	0	2	4.0	29	58.0	14	28.0	5	10.0
4	The print-based design facilities in my institution meet the needs of lecturers.	1	2.0	1	2.0	35	70.0	9	18.0	4	8.0
5	The design facilities in my institution meet the needs of print-based graphic design industry.	3	6.0	1	2.0	30	60.0	13	26.0	3	6.0
6	My institution is focused on what is most important for students, in terms of print-based graphic design.	12	24.0	22	44.0	10	20.0	2	4.0	4	8.0
7	Public universities are expected to move with the trend of technological development in the print-based graphic design profession.	33	66.0	15	30.0	1	2.0	0	0	1	2.0
8	My institution is moving with the trend of technological development in the print-based graphic design profession.	2	4.0	7	14.0	23	46.0	10	20.0	8	16.0
9	Students in my institution are taught with the latest technology in the print-based graphic design profession.	2	4.0	6	12.0	28	56.0	12	24.0	2	4.0
10	In my institution students learn through practical demonstration with the latest technology in the print-based graphic design field.	4	8.0	2	4.0	29	58.0	8	16.0	7	14.0
11	As a class we have had the privilege of visiting a print based graphic design firm.	9	18.0	24	48.0	4	8.0	12	24.0	1	2.0
12	In my institution there is a printing press that belongs to the institution	20	40.0	3	6.0	17	34.0	9	18.0	1	2.0

13	Students often go to the institution's printing press for practical demonstration.	3	6.0	5	10.0	25	50.0	15	30.0	2	4.0
14	Graphic design (print based) industries are current in terms of technological development in the profession.	25	50.0	10	20.0	8	16.0	5	10.0	2	4.0
15	The universities have a planned and managed ways, in adopting technology in a faster and more proactive way.	6	12.0	1	2.0	23	46.0	12	24.0	8	16.0

Table 4.15 Respondents response to the availability, adequacy and relevancy of print based facilities in public universities.

From the table above, it is revealed that majority of the respondents agree that Teaching Facilities in the Nigeria public universities were not adequate, less relevant and students are under exposed to the use of modern (print based) graphic design facilities.

Analysis of graphic graduates, Supervisors or directors with the (Print based) Design Industries Questionnaire.

Table 1 Distribution of Respondents by Organisation

Name of Organisation	Frequency	(%)	Valid (%)	Cumulative (%)
<i>ABTI Printing Press, Yola.</i>	2	18.2	18.2	18.2
<i>ATIL, ATBU Bauchi.</i>	1	9.1	9.1	27.3
<i>Excell Global Printers Ltd Kaduna.</i>	1	9.1	9.1	36.4
<i>Flamingo Digital Prints, Akure.</i>	2	18.2	18.2	54.5
<i>Micro trend Printers Ltd Yola.</i>	1	9.1	9.1	63.6
<i>Ramadam Press, Bauchi.</i>	1	9.1	9.1	72.7
<i>Signal 7000 Digital, Akure.</i>	2	18.2	18.2	90.9
<i>Unique Ace Integrated Ltd Kaduna.</i>	1	9.1	9.1	100.0
Total	11	100.0	100.0	

From the table above, 2(18.2%) of the respondents each were from ABTI Printing Press, Yola., Flamingo Digital Prints, Akure and Signal 7000 Digital, Akure respectively. While 1(9.1%) of the respondents each were from ATIL,

ATBU Bauchi., Ramadam Press, Bauchi., Excell Global Printers Ltd Kaduna., Unique Ace Integrated Ltd Kaduna., Micro trend Printers Ltd Yola respectively. This reveals that ABTI Printing Press, Yola., Flamingo Digital Prints, Akure and Signal 7000 Digital, Akure had more respondents.

Distribution of Respondents by Organisation

<i>Name of Organisation</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>ATIL Press A.T.B.U Bauchi</i>	1	12.5	12.5	12.5
<i>ABTI Press Yola</i>	1	12.5	12.5	25.0
<i>Excell Global Printers Ltd Kaduna</i>	1	12.5	12.5	37.5
<i>Flamingo Digital Prints Akure</i>	1	12.5	12.5	50.0
<i>Micro trend Printers Ltd Yola</i>	1	12.5	12.5	62.5
<i>Ramada Press Bauchi</i>	1	12.5	12.5	75.0
<i>Signal 7000 Digital Akure</i>	1	12.5	12.5	87.5
<i>Unique-Ace Integrate Ltd Kaduna</i>	1	12.5	12.5	100.0
Total	8	100.0	100.0	

From the table above,1(12.5%) of the respondents, one each from every organisation listed respectively. This reveals that the respondents were equally represented.

Table 2.4 Distribution of Respondents by Highest Educational Qualification

<i>Qualification</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>Master</i>	1	12.5	12.5	12.5
<i>Bachelor</i>	4	50.0	50.0	62.5
<i>HND</i>	3	37.5	37.5	100.0
Total	8	100.0	100.0	

From the table above,4(50%) of the respondents fell within those with Bachelor degree and 3(37.5) fell within those with an HND, while 1(12.5%) fell within those with Masters degree. This reveals that most of the respondents fell within those with Bachelor's degree.

Table 2.1 Distribution of Respondents by Gender

<i>Sex</i>	Frequency	(%)	Valid (%)	Cumulative (%)
<i>Male</i>	6	75.0	75.0	75.0
<i>Female</i>	2	25.0	25.0	100.0
Total	8	100.0	100.0	

From the table above, 6(75%) of the respondents were male while 2(25%) of the respondents were female. This shows that there were more male than female respondents

Table 2.2 Distribution of Respondents by Age Group

Age Range	Frequency	(%)	Valid (%)	Cumulative (%)
30 - 39 Years	4	50.0	50.0	50.0
40 - 49 Years	3	37.5	37.5	87.5
50 and above Years	1	12.5	12.5	100.0
Total	8	100.0	100.0	

From the above, 4(50%) fell within the age of 30 to 39 years and 3(37.5%) fell within the age of 40 to 49 years, while 1(12.5%) fell within the age of 50 and above. The table reveals that most of the respondents fell within the age of 30 to 39 years.

Table 2.7 Respondents Response to the level of collaboration between (print base) graphic design industries and public universities in Nigerian.

		SA		A		D		SD		U	
		F	%	F	%	F	%	F	%	F	%
1	Professionals in the print-based graphic design, both in the universities and the industries have not yet developed a network to share best practices.	5	62.5	3	37.5	0	0	0	0	0	0
2	Professionals in the print-based graphic design, both the universities and the industries have not yet developed a network to learn about new approaches.	3	37.5	4	50.0	1	12.5	0	0	0	0
3	Universities and professionals in the print-based graphic design industries share new innovations, technology and practice.	0	0	2	25.0	4	50.0	1	12.5	1	12.5
4	Those responsible for planning in the universities understood the relationships between universities and print-based graphic design industries in Nigeria.	0	0	2	25.0	5	62.5	1	12.5	0	0
5	There is a developed sound comparable performance indicators and benchmarking systems between universities and (print-based graphic design industries in Nigeria.	1	12.5	1	12.5	5	62.5	1	12.5	0	0
6	Professionals and universities in the print-based graphic design field have a common forum and supporting umbrella that brings them together.	0	0	2	25.0	5	62.5	1	12.5	0	0
7	Universities and professionals in the print-based graphic design industries enjoy cordial relationship, on how they would improve the industry.	1	12.5	1	12.5	5	62.5	1	12.5	0	0
8	Seminars/workshops are "seed" initiative which may eventually evolve in to a periodic forum and a supporting organisation	4	50.0	3	37.5	0	0	0	0	1	12.5

9	Universities and professionals in the graphic design industries take the initiative of jointly organising seminars/workshops in support of the print-based graphic design field	0	0	2	25.0	5	62.5	1	12.5	0	0
---	---	---	---	---	------	---	------	---	------	---	---

Table 2.7 Respondents Response to the level of collaboration between (print base) graphic design industries and public universities in Nigerian.

Table 2.7 reveals that most of the respondents agree that there is a gulf in the level of collaboration between print-based graphic design industries and public universities in Nigeria.

Major Findings

The major findings of the research are arrived at from data gathered from the questionnaires administered to graduates and supervisors working in some selected print-based design industries. The following findings were made;

1. Print-based graphic design facilities in public universities were not adequately provided, obsolete in nature, and less relevant.
2. It was observed that the print-based graphic design industry has more state-of-the-art printing facilities, as such; graduates need re-training/internship programme to be able to function properly in the print-based graphic design industry.
3. The level of collaboration between print-based graphic design industry and public universities in Nigerian is important but does not exist.

Discussion

Industrial design department in public universities are vested with the responsibility of production of graphic designers for Nigeria's graphic design industry. The print-based graphic design is undeniably a vital aspect of the students' developmental process as a graphic designer. 90% of the respondents strongly agree with this statement, the result of the study has shown that, the design facilities and equipment in the public universities as were revealed were not sufficient to support a developmentally oriented curriculum. This is in conformity This is supported by Afolabi (2014) who posits that, there is an urgent need to ensure that training opportunities in Nigeria's graphic design schools meet up with industry needs."

Professionals in the print-based graphic design industries and the universities have not yet develop a network of sharing best practices, learn about new approaches and share new innovations and technology. By implication, those responsible for planning in the universities need to understand the relationship between the universities and print-based graphic design industries in Nigeria. This will fast track the development of sound comparable performance indicators and benchmarking system between

schools and print-based graphic design industries in Nigeria. A common forum, cordial relationship and supporting umbrella should be developed, this will bring both party together on how they would improve the industry. Similarly, Raver (2012) notes that it is essential to have industry-university interactions which will help to impart relevant knowledge and will be sustainable in the changing conditions. Universities and professionals in the graphic design industries should take the initiative of jointly organising seminars/workshops in support of the print-based graphic design field. Universities and print-based graphic design industries have a responsibility to give students a better learning platform that will enhance their developmental process as graphic designers it was gathered that industries were more current in terms of equipment and technological development in the printing.

Pictures of some machines in the Universities and Printing Based Industries



Plate I: Heidelberg Typography Printing Machine. ABU, Zaria.
Source: Original photograph by Maxwell E. Roberts, 2018.



**Plate II: Multilith Offset model 1850 Printing Machine. ATBU, Bauchi.
Source: Original photograph by Maxwell E. Roberts, 2018.**



Plate III: Flex Banner Printer. Flamingos Digital Prints, Akure.

Source: Original photograph by Maxwell E. Roberts, 2018.



Plate IV: Stahlfolder Machine ABTI Press, Yola.

Source: Original photograph by Maxwell E. Roberts, 2018.

Conclusion

This research endeavour might have made a considerable stride in the understanding of the impact of collaboration between the universities and Print based graphic design industry in Nigeria towards producing a new caliber of students whose professional ability are very essential in a developing economy

Recommendation

Recommendations are primarily grounded on findings of the study they are likewise comparatively established on scholar's involvements and annotations on the prevailing situation of data gathering.

- (1) Public Universities should be well provided for in terms of machines and equipment, as such the quality of graduates will improve and they will function properly in the print-based graphic design industry. University management should initiate ways of sourcing fund for this holistic purpose.
- (2) It is more evident now in educational setting, that schools face notable shift in emphasis in terms of curriculum and aims, leaving a deficit on professional and industry skills, which will be blamed on a lack of interaction between industry and university. Hence it is essential to have mechanism that will foster the relationship between university and industry which will help to impart relevant knowledge and will be sustainable in the changing conditions.

Reference

- Adewumi, A. (2002). The computer as tool in contemporary design: design history in Nigeria; History conference in honour of Demas Nwoko Uniport, Port Harcourt.
- Afolabi, A. (2014). Creating job opportunities in nigeria's printing industry: new thinking communications technology curriculum as perceived by the graphic communications industry and educators " *Journal of Industrial Technology*, Vol. 19(2).
- Baljon, C. (2002), "History of history and canons of design" *Design studies*, vol 23, (3). Elsevier science, London.
- Drucker, P. (1997). Interview in Forbes, March, 10.
- Dwiggins, W. A. (1999). New kind of printing calls for new design. In Bierut, M. et al. (Eds.). Looking closer 3: Classic writings on graphic design. Allworth Press, New York.
- Ekukinami T.U (2002). The status of application of information technology in primary schools. AKSJEMT: Obafemi Awolowo University, Ile-Ife.
- Halina (2012). Career development, popular posts, post-doctoral related, transition from academia into industry. October 4, 2018, retrieved from: <http://www.thegradstudentway.com/blog?>
- Hollis, R. (1994). *Graphic design manual: a concise history*, Thomas and Hudson Limited London.
- Hoy, W. and Miskel, C. (1996). *Educational administration theory, research, and practice*. McGraw Hill, New York.
- Johnson, B. (1996), "Toward a multidimensional model of entrepreneurship: the case of achievement and the entrepreneur", *entrepreneurship: theory & practice*, 14, pp.39-54.
- Jude, W. I., and Dankaro, J. T. (2012). ICT resource utilization, availability and accessibility by teacher educators for instructional development in college of education katsina-Ala. *New media and mass communication*, 3, pp. 1-6.
- Kaymaz K, Eryigit KY (2011). Determining factors hindering university-industry collaboration: an analysis from the perspective of academicians in the context of entrepreneurial science. *International journal of social inquiry*. 4(1): pp. 185-213
- Marmolejo, F. (2007). Higher education facilities. 1 issues and trends PEB exchange organisation for economic co-operation and development (OECD).
- Othman, M. K. (2016). Educational feats of Nigerians in diaspora: food for thought ii Leadership, June 24, p. 42.
- Pricewaterhousecooper & enterprise (1999). *Opportunities in design*. Pricewaterhousecooper, Dublin.
- Raver, R. (2012). One step at a time: bridging the gap between academia and industry. retrieved August 15, 2018 from: <http://www.thegradstudentway.com/blog?>
- Scott, R. (1998). *Organizations: rational, natural, and open systems* (Fourth ed.). Upper Saddle River, Prentice Hall, New Jersey.
- TVET (2007), *Strategy to revitalize technical and vocational education and training (TVET) in Africa*. meeting of the bureau of the conference of ministers of education of the African Union (COMEDAF II+) 29-31 May 2007. African Union Addis Ababa, Ethiopia.
- Woods, S. (2007). Design education must provide wider range of skills Retrieved December 15, 2018 from Centaur Communications, London. [www. http://dx.doi.org/10.1093/wber/15](http://dx.doi.org/10.1093/wber/15)