Skills Mismatch Among University Graduates in the Nigeria Labor Market

Pitan Oluyomi S., Adedeji S. O.

University of Ibadan, Ibadan, Nigeria

University graduates in Nigeria have been reported to be poorly prepared for work in recent years. This has implications on the relevance of university education, the employability and productivity of university graduates. One of the reasons suggested for this condition by previous studies was skill mismatch—a situation where there is a disparity between the skills acquired by students in the universities and the actual skills needed in the labor market. However, not many of these studies have investigated the extent of skill mismatch in Nigeria. This study, therefore, examined the problem of skills mismatch and its prevalence in the Nigeria labor market. The study adopted the descriptive survey research design of "ex-post facto" type. The research was carried out in all the six geo-political zones of the country. Purposive sampling technique was used to select one town per geo-political zone. A total of 600 management staffs were randomly selected for the study. A set of questionnaire titled "Labor Market Demands and Employers Assessment Questionnaire" ($r = 0.83$) was utilized to elicit relevant information from employers of labor on the current labor market skill demands and their assessment of the performance of recently employed university graduates in 300 organizations (from both private and public sectors). Three research questions were answered and two hypotheses were tested at the significant level of 0.05. Data were analyzed using descriptive statistics, ANOVA (analysis of variance) and t-tests. There was a significant negative relationship between skills demand and supply ($r = -0.485$; $p < 0.05$). The extent of skills mismatch was 60.6% with major weaknesses found in communication, IT (information technology), decision-making, critical thinking and entrepreneurial skills. Analytical skill was the most required skill by the labor market and critical thinking the least. The mean for each of the skills demand was significantly different from its supply. University graduates were not adequately prepared for work with respect to skills demand of the labor market. Nigerian universities are therefore enjoined to inculcate the skills identified as critical but deficient in the graduates. Also, parents should understand the skills demand of the labor market in order to guide their wards appropriately.

Keywords: skills mismatch, employed university graduates, labor market

Introduction

Skill is the ability to perform a task to a predefined level of competence. Skills are often divided into two types: transferable or generic skills which can be used across large numbers of different occupations, and vocational skills which are specific occupational or technical skills needed to work within an occupation or occupational group. Skills mismatch is generally understood as various types of gaps or imbalances referring to skills, knowledge or competencies that may be of a quantitative or qualitative nature (Proctor & Dutta, 1995). It

---

Pitan Oluyomi S., Ph.D., Department of Educational Management, University of Ibadan.
Adedeji S. O., Ph.D., Reader/associate professor, Department of Educational Management, University of Ibadan.

is the difference between the competence of the graduate and employers' expected competence needs.

The various skills (generic skills) that employers now demand for in addition to academic skills are analytical, critical thinking, communication, entrepreneurial, decision making, IT (information technology), interpersonal, problem-solving, self-directed and numeracy skills. Brown, Halsey, Lauder, and Wells (1997) noted that employers now emphasize the need for employees who have good personal social skills, together with any technical know-how which may be required. At least, among core workers, there is an expectation that they will be able to work in a rapidly changing environment, engage in "rule making" rather than "rule following" behavior, work in project teams and share the same "personal chemistry" as others in the organization (Atkinson, 1985). Brown et al. (1997) further stressed the fact that academic qualifications now tell employers less about what they need to know about potential recruits, given that they convey information about the individual's ability and motivation to jump through the appropriate test and examination hoops, rather than students potential to work in teams or about their social and personal skills. Boateng and Ofori-Sarpong (2002) and Akerele and Opatola (2004) in their respective studies on the labor market for tertiary graduates in Ghana and Nigeria, found out that apart from the qualifications that graduates may possess, there are other attributes (non-academic skill requirements) which employers emphasize, such as good personal and social skills, analytical skills, good communication skills, technical and managerial skills, etc.. Employers want workers who are already made to perform, because markets are becoming more competitive and because cost of on-the-job training is becoming prohibitive. They found out that about 50% of all jobs requiring university education and 30% of all jobs requiring that at least, polytechnic diploma also require computing and analytical skills.

Unfortunately, responses of employers of labor on the competencies and performance of recent graduates reveal that these characteristics are lacking in the graduates universities are turning out into the labor market. For example, in South Africa, Pauw, Ooshuizen, and Westhuizen (2007) discovered that many graduates lack soft skills, workplace readiness and experience. The report revealed that at the start of their careers, many graduates lack the so-called "soft skills", such as time management, creative thinking and general communication skills. This is one of the reasons why many candidates are unsuccessful in the recruitment phase. In Ghana, Boateng, and Ofori-Sarpong (2002) noted that employers of labor observed recent graduates as those who lack the basic skills to complete simple routine assignments which gives the impression that certification is a mere formality rather than an indication of achievement.

In Nigeria, the situation is not different, and employers believe that "University graduates are poorly trained and unproductive on the job, and shortcomings are particularly severe in oral and written communication, and in applied technical skills" (Dabalen, Oni, & Adekola, 2000). In this same report and that of Saint, Hartnett, and Strassner (2004), employers were reported to complain that graduates are poorly prepared for work. They believe that academic standards have fallen considerably over the past decade and that a university degree is no longer a guarantee of communication skills or technical competence. As a result, university graduates are commonly viewed as "half baked". Although many employers confirm that the graduates possess a broad and respectable understanding of the knowledge base in technical disciplines, they expressed disappointment with the preparation of graduates in those applied technical skills necessary for solving problems and enhancing business productivity. Many companies characterize the universities as emphasizing "too much theory and too little practical training". According to Dabalen et al. (2000), graduates working in manufacturing businesses rated as poor, the adequacy of university efforts in preparing them for their work. The authors concluded that despite of the lack of sufficient empirical information and reports, the findings of their

study illustrated a wide gap between what is taught in the universities and what the world of work requires.

The gap identified between demand and supply of skills has been found to have several impacts and implications on companies and organizations. At the firms or organizations level, skills shortages will compromise firms' productivity or quality and competitiveness. Shortage of skills has a direct negative impact on productivity depending on to what extent skills that became obsolete are important in the production process. It can also result that in higher wages, may increase recruitment costs, may require more investment in current personnel, can result in market losses and could imply a greater workload and pressure on current personnel. In addition to possible adverse impacts on individual organizations, skills mismatch may hamper economic growth, competitiveness and innovative capacity at macro-economic level. It also reflects itself in imbalances in the labor market through unemployment. All these identified problems arising from skills mismatch pose a great challenge to the market relevance of university education. Education is said to be relevant, if it can be used by the society to realize its dreams (Longe, 1999), i.e., full employment level, increased productivity, increased level of income and economic growth. But, when these expectations have become a mere mirage, the problem needs an urgent attention. If not, Nigeria's quest of becoming one of the 20 leading economies by 2020 will be an illusion. This was the reason why this study was carried out to investigate the gaps in skills and knowledge acquired by university graduates, which must be bridged in order to meet the requirements of the different sectors in the labor market.

Statement of the Problem

The major problem which this study investigated was the prevalence and extent of mismatch between the supply of and demand of skills among university graduates in the Nigeria labor market. This becomes necessary and needs urgent attention because of the great challenge, it poses on the market relevance of university education in Nigeria, and for the magnitude of returns to public investment in university education.

Research Questions

The research questions are as follows:

(1) What are the skills demanded by the employers of labor from university graduates?

(2) What is the level of skills that the Nigerian university graduates display in their places of work?

(3) To what extent is the mismatch between the skill acquired by university graduates and the demands of their jobs?

Hypotheses

The hypotheses are as follows:

(1) There is no significant relationship between the supply of skills by university graduates and skills demands of the labor market;

(2) There is no significant difference between the demand and supply of each of the skills considered in the study.

Methodology

The study adopted the descriptive survey research design of the "ex-post facto" type. Purposive sampling technique was used to collect data from employed university graduates in one town from the six geo-political zones in Nigeria. A set of questionnaire titled "LAMADEAQ (labor market demands and employers assessment

questionnaire)" was utilized to elicit relevant information from employers of labor (management staff or bosses of graduate employees) on the current labor market skill demands and their assessment of the performance of recently employed university graduates in 300 organizations (from both private and public sectors).

The validity of the instrument was guaranteed by subjecting it to thorough scrutiny by experts in relevant fields. The Cronbach method was used to test the reliability of the instrument. The reliability coefficient of the instrument was 0.83 which confirms that the instrument is reliable. Data collected were analyzed using descriptive (frequency counts, percentages, means and standard deviations) and inferential (ANOVA (analysis of variance) and *t*-test) statistics.

Results

Research Question 1

What are the skills demanded by the employers of labor from university graduates?

Table 1

Skills Demanded of University Graduates by Employers.

S/N	Skill	Very critical 4	Critical 3	Less critical 2	Not critical 1	Mean	SD
1	Analytical	268 (63.7)	141 (33.5)	11 (2.6)	1 (0.2)	3.61	0.55
2	Entrepreneurial	201 (47.7)	182 (43.2)	32 (7.6)	6 (1.4)	3.37	0.69
3	Critical thinking	73 (17.3)	111 (26.4)	68 (16.2)	169 (40.1)	2.21	1.15
4	Communication	104 (24.7)	91 (21.6)	206 (48.9)	20 (4.8)	2.66	0.90
5	Decision-making	135 (32.1)	107 (25.4)	165 (39.2)	14 (3.3)	2.86	0.91
6	Information technology	163 (38.7)	147 (34.9)	101 (24.0)	10 (2.4)	3.09	0.85
7	Interpersonal	123 (29.2)	250 (59.4)	43 (10.2)	5 (1.2)	3.16	0.64
8	Problem-solving	128 (30.4)	240 (57.0)	51 (12.1)	2 (0.5)	3.17	0.64
9	Self-directed learning	177 (42.0)	151 (35.9)	87 (20.7)	6 (1.4)	3.18	0.81
10	Technical	124 (29.5)	209 (49.6)	81 (19.2)	7 (1.7)	3.07	0.74
11	Numeracy	127 (30.2)	165 (39.2)	112 (26.6)	17 (4.0)	2.95	0.85
Weighted average = 3.03							

Notes. $X \geq 2.50$ is critical $N = 421$; Figures in parentheses are percentage of the respondents.

From Table1, 10 out of the listed group of skills were considered critical by the employers of labor. These include analytical skills (mean = 3.61, *SD* = 0.55) which was deemed as very critical and entrepreneurial skills (mean = 3.37, *SD* = 0.69), communication skills (mean = 2.66, *SD* = 0.90), decision-making skills (mean = 2.86, *SD* = 0.91), IT skills (mean =3.09, *SD* = 0.85) and interpersonal skills (mean = 3.16, *SD* = 0.64) were also critically required. Others include problem solving (mean = 3.17, *SD* = 0.64), self-directed learning skills (mean = 3.18, *SD* = 0.81), technical skills (mean = 3.07, *SD* = 0.74) and numeracy skills (mean = 2.95, *SD* = 0.85). The weighted average of 3.03 for all the skills listed indicates that all the listed skills (except for critical thinking skill) were in critical demand by the employers of labor.

Research Question 2

What is the level of skills that the Nigerian university graduates display in the work place?

Table 2 showed that the display of skills by university graduates was significantly low, and they were scored low, in fact poor and in every skill listed. For analytical skills, graduates displayed a mean score of 1.88 (*SD* = 0.79), entrepreneurial skills (mean = 1.43, *SD* = 0.78), critical thinking skills (mean = 1.37, *SD* = 0.69),

communication skills (mean = 1.30, *SD* = 0.59), IT skills (mean = 1.34, *SD* = 0.70), interpersonal skills (mean = 1.39, *SD* = 0.72), decision making skills (mean = 1.37, *SD* = 0.71), and the mean scores were all low. Other skills which graduates displayed very low included self-directed learning (mean = 1.74, *SD* = 0.69), technical skills (mean = 1.50, *SD* = 0.78) and numeracy skills (mean = 1.52, *SD* = 0.85). The only skill which graduates displayed relatively highly is problem-solving skills (mean = 2.46; *SD* = 0.98). On the whole, the weighted average of 1.57 is significantly low and generally poor indicating a general poor level of performance of recent university graduates in the different organizations.

Table 2

Level of Skills Displayed by Nigerian University Graduates in the Work Place

S/N	Skill	Very good 4	Good 3	Average 2	Poor 1	Mean	*SD*
1	Analytical	4 (1.0)	96 (22.8)	166 (39.4)	155 (36.8)	1.88	0.79
2	Entrepreneurial	4 (1.0)	63 (15.0)	42 (10.0)	312 (74.1)	1.43	0.78
3	Critical thinking	3 (0.7)	44 (10.5)	60 (14.3)	314 (74.6)	1.37	0.69
4	Communication	2 (0.5)	24 (5.7)	73 (17.3)	322 (76.5)	1.30	0.59
5	Decision-making	2 (0.5)	50 (11.9)	50 (11.9)	319 (75.8)	1.37	0.71
6	Information technology	6(1.4)	35 (8.3)	56 (13.3)	324 (77.0)	1.34	0.70
7	Interpersonal	3 (0.7)	51 (12.1)	53 (12.6)	314 (74.6)	1.39	0.72
8	Problem-solving	65 (15.4)	149(35.4	123 (29.2)	84 (20.0)	2.46	0.98
9	Self-directed learning	3 (0.7)	52 (12.4)	197 (46.8)	169 (40.1)	1.74	0.70
10	Technical	5 (1.2)	60 (14.3)	76 (18.1)	280 (66.5)	1.50	0.78
11	Numeracy	11(2.6)	59 (14.0)	65 (15.4)	286 (67.9)	1.52	0.85
Weighted average = 1.57							

Notes. N = 421, $X \geq 3$ is good; Figures in parentheses are percentage of the respondents.

Research Question 3

To what extent is the mismatch between the skill acquired by university graduates and the demands of their jobs?

Table 3

The Extent of Mismatch Between the Skills Acquired by University Graduates and the Demands of Their Jobs

S/N	Skill	1 Mean skill demand (SD)	2 Mean skill supply (SS)	3 Supply relative to demand (ASS) = SS/4 × SD	4 Extent of mismatch = (SD−ASS)	5 Extent of mismatch = (SD − ASS)/SD×100 (%)	Rank
1	Analytical	3.61	1.88	1.71	1.90	52.6	10
2	Entrepreneurial	3.37	1.43	1.20	2.17	64.3	6
3	Critical Thinking	2.21	1.37	0.76	1.45	65.6	4
4	Communication	2.66	1.30	0.86	1.80	67.7	1
5	Decision Making	2.86	1.37	0.98	1.88	65.7	3
6	Information technology	3.09	1.34	1.04	2.05	66.3	2
7	Interpersonal	3.16	1.39	1.10	2.06	65.1	5
8	Problem Solving	3.17	2.46	1.95	1.22	38.4	11
9	Self-directed learning	3.18	1.74	1.38	1.80	56.6	9
10	Technical	3.07	1.50	1.15	1.91	62.2	7
11	Numeracy	2.95	1.52	1.12	1.83	62.0	8
Total				Extent of mismatch = 60.59			

From Table 3, the extent of the mismatch of skills under review was generally high except for problem-solving skills. The least supplied skill relative to its demand was that of communication (67.7%), which was the highest compared to other skills required by the employers. This is followed by IT (66. 3%), decision-making (65.7%), critical thinking (65.6%), interpersonal (65.1%) entrepreneurial (64.3%), technical (62.2.9%), numeracy (62.0%), self-directed (56.6%), analytical (52.6%) and problem-solving (38.4%). The extent of mismatch of skills under review was 60.59% which was considered high being more than half of skill requirement of the employers.

Hypothesis 1

There is no significant relationship between the supply of skills by university graduates and skills demand of the labor market.

Table 4

Relationship Between the Supply of Skills by University Graduates and Skills Demand of the Labor Market

$R = 0.485$; $R^2 = 0.235$; Adjusted $R^2 = 0.233$; Standard error of the estimate = 5.00554					
Analysis of variance					
	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	3229.521	1	3229.521		
Residual	10498.227	419	25.055	128.895	0.001
Total	13727.748	420			

From Table 4, regression results showed that there was a significant relationship between the supply of skills by university graduates and skills demand of the labor market, $R^2_{adj} = 0.233$, $F_{(1,419)} = 12.895$, $P < 0.05$. The independent variable (skills demand) can explain for 23.5% of the total variance observed in the supply of skills; $R^2 = 0.235$, $R^2_{adj} = 0.233$.

Table 5

Relationship Between Skills Demand and Supply

Model	Unstandardized coefficients		Standardized coefficients	*t*	Sig.
	B	Std error	Beta		
Constant	40.528	1.382		29.333	0.000
Skills demand	-0.457	0.040	-0.485	-11.353	0.000

Note. Dependent variable: Supply of skills.

From Table 5, Beta = -0.485, $t_{(419)} = -11.353$, $P < 0.000$. This indicated that the relationship between skills demand and supply is a negative one. The negative relationship here implies that as the demand for skills increased in the labor market, the quality of skills supplied by university graduates decreased significantly.

Hypothesis 2

There is no significant mean difference between the demand and supply of each of the skills.

There were significant differences between the paired comparisons of demand for and supply of all the skills. The significantly highest mean difference was between the demand and supply of entrepreneurial skills ($t = 38.039$, $P < 0.05$) followed by interpersonal ($t = 37.660$, $P < 0.05$), IT ($t = 32.407$, $P < 0.05$), analytical ($t = 36.809$, $P < 0.05$), and then decision-making skills ($t = 26.428$, $P < 0.05$). The significantly lowest difference was between the demand and supply of problem-solving skill ($t = 12.456$, $P < 0.05$). Based on these results,

hypothesis 2 was rejected. The results also showed that the supply of all the skills considered in the study by university graduates differed significantly from the requirements of the labor market (see Table 6).

Table 6

T-test of Differences in the Demand and Supply of Each of the Skills

S/N	Skills	Skills demanded		Skills supplied		Mean difference	Std. error	*t*-value
		Mean	SD	Mean	SD			
1	Analytical	3.61	0.55	1.88	0.79	1.73	0.047	36.809[*]
2	Entrepreneurial	3.37	0.69	1.43	0.78	1.94	0.051	38.039[*]
3	Critical thinking	2.21	1.15	1.37	0.69	0.84	0.065	12.923[*]
4	Communication	2.66	0.90	1.30	0.59	1.36	0.053	25.660[*]
5	Decision-making	2.86	0.91	1.37	0.71	1.48	0.056	26.428[*]
6	Information technology	3.09	0.85	1.34	0.70	1.75	0.054	32.407[*]
7	Interpersonal	3.16	0.64	1.39	0.72	1.77	0.047	37.660[*]
8	Problem-solving	3.17	0.64	2.46	0.98	0.71	0.057	12.456[*]
9	Self-directed learning	3.18	0.81	1.74	0.70	1.44	0.052	27.692[*]
10	Technical	3.07	0.74	1.50	0.78	1.57	0.053	30.192[*]
11	Numeracy	2.95	0.85	1.52	0.85	1.44	0.059	24.407[*]

Notes. [*]Significant at 0.05; $N = 421$; $df = 420$.

Discussion

Answers to RQ_1 (research question 1) indicated that employers demanded for all the skills under review-analytical, entrepreneurial, critical thinking, communication, decision-making, IT, interpersonal, problem-solving and self-directed learning skills. The mean values for the skills, except for critical thinking, were high revealing that those skills were needed critically, and that critical thinking skill was needed only to a lesser extent compared to others. Analytical and entrepreneurial skills appeared to be the most sought after in combination with the respective academic skills. Reasons for the preference may vary from one individual or organization to another, but essentially, businesses will grow and be more profitable, if workers are analytical, that is, skilled in using methods help in examining intellectual or substantial things carefully, and separating them into their elemental parts or basic principles.

The high weighted average of 3.03 obtained from Table 1 implies that the labor market is not asking for a "Perfect", "Excellent" or "Very good" score, but 3.03 out of 4 (or 75.75%) which translates to a "Good" score. This is, of course, achievable with a little more concerted demand-directed effort. This high weighted average of 3.03 also suggests that the quality of skills demanded is high in the labor market. In other words, there is a high demand for ready-made or ready-to-perform graduates in whom these skills are found. This is not only applicable to Nigeria. All over the world, several theoretical and empirical studies (Boateng & Ofori-Sarpong, 2002; Frogner, 2002) have identified increased demand for generic skills, such as communication, problem-solving, analytical, social and good interpersonal skills, and the ability to use IT equipment. The difference, however, is in the ranking of the demand for these different skills in different countries. For example, Frogner (2002) reported that in the UK, the most sought after skill was communication, followed by team-working and other technical/practical skills. Basic computing and advanced IT or software only came in at 7th and 8th places respectively, both being sought less than half as often as communications skills.

From the results obtained for RQ_2, recent graduates displayed inadequately, the skills listed. The weighted

average of 1.57 revealed that the general performance of the graduates in terms of skill supply is not high enough, in fact, poor, even the low-rated skill by the employer, critical thinking, was poorly supplied by the graduates. Although not high enough, the skill that employers believed was relatively highly supplied and was that of problem-solving, which was still below average. It is surprising that with the current awareness in IT on the campuses and its use by students in writing their take-home assignments, term papers, seminars and dissertations, graduates still displayed this skill and other related ones, such as analytical, self-directed learning and numeracy skills, inadequately. Students must, therefore, be more involved in IT and be better equipped with its application in their respective chosen career. On the other hand, problem-solving skill, which was displayed to a fair extent, is likely to have been acquired from experiences of students on their research projects and seminars. A serious deficiency in university graduates as found in this study was the poor display of entrepreneurial skills. Entrepreneurial skill is the job-creation skill and the ability to arrange business deals and take risks in order to make a profit. The adequate display of which would reduce the rate of unemployment and graduates would be able to start businesses and make profit from them.

Answers for RQ_3 were obtained from those already provided for RQ_1 and RQ_2. From this result, it is confirmed empirically that there is skills mismatch. Graduate skills demand was found to be higher than supply. This finding agrees with the earlier speculations on the subject by Dabalen et al. (2000). But more importantly, the extent of this mismatch is alarming. Out of the 11 skills investigated, the magnitudes of mismatch for 10 were above 50%, while that for only problem-solving skill was below 40%, indicating that it was the only one adequately supplied. The overall extent of mismatch of 60.59% shows that far below half the quality of skills demanded were actually supplied. The areas of major weaknesses in the supply of skills by the graduates were entrepreneurial skills, IT, interpersonal relationships, decision-making, technical, communication, numeracy, analytical, self-directed and critical thinking skills.

The results obtained from hypothesis 1 that there was a significant negative relationship between skills demand and supply further confirmed the huge extent of mismatch found out from RQ_3. The negative value of "r" suggests that as quality of skills demanded increases, skill supply reduces. This could also be buttressed by the result of hypothesis 2 which showed that significant differences existed between the demand and supply of each of the skills considered. This is completely at variance with what ought to be. Changes in the structure of work should have major implications for the changing nature of the skills acquired in schools (Anderson, 1994; as cited in Brown, Halsey, Lauder, & Wells, 1997). That is, it should be the responsibility of the education system (especially the universities) to ensure that graduates acquire skills which will respond to increased demands and challenges in the labor market. The lack of fit between skills supplied and skills demanded is a sign of a serious deficiency in the relationship between the labor market and the university which would consequently reduce graduate productivity and increase the unemployability of university graduates. These findings are corroborated by several earlier findings; for example, NUC (National Universities Commission) (2004) reported that recent graduates from almost all disciplines have weaknesses in IT, entrepreneurial skill, communication skill and managerial skill. Similarly, Dabalen et al. (2000) reported that the shortcomings of recent graduates were severe in oral and written communication and in applied technical skills. Although the graduates possess a broad and respectable understanding of the knowledge base in technical disciplines, the authors expressed disappointment with the preparation of the graduates in those applied technical skills necessary for solving-problems and enhancing business productivity. This imbalance identified was attributable to the lack of fit between what is taught in schools and what is needed on the job.

Conclusions and Recommendations

This study was carried out to assess the incidence and extent of skills mismatch among employed university graduates in Nigeria labor market. The findings from the study showed that there were gross inadequacies in the supply of all the skills (except problem-solving skill), as needed by the employers and by extension the labor market. A skill mismatch of 60.6% was identified among recent graduates. Communication, IT, decision-making, critical thinking, interpersonal relationship, and entrepreneurial, technical and numeracy skills were found to be critically deficient. The study thus recommends that Nigerian universities should incorporate in their curriculum the inculcation of those skills that are in high demand by the labor market. This can be achieved by placing greater emphasis on practical work and real life situation more than theory in the curriculum.

References

Akerele, W. O., & Opatola, A. O. (2004). Higher education and the labor market in Nigeria. *A Final Report Submitted (by NISER) to African Economic Research Consortium* (p. 67). Nairobi, Kenya.

Allen, J., & De Weert, E. (2007). What do educational mismatches tell us about skill mismatches? A cross-country analysis. *European Journal of Education, 42*(1), 59-73.

Allen, J., & Van der Velden, R. (2001). Educational mismatches versus skill mismatches: Effects on wages, job satisfaction, and on-the-job search. *Oxford Economic Papers, 3,* 434-452.

Atkinson, J. (1985). *Flexibility, uncertainty and manpower management* (p. 124). Brighton, UK, Institute for Employment Studies.

Babalola, J. B. (2004). Cost and financing of university education in Nigeria. *Higher Education, 36*(1), 43-66. Retrieved August 26, 2009, from http://wwwspringerlink.com/content/k0213j350110112v/#Contact

Babalola, J. B. (2007). *Reinventing Nigerian higher education for youth employment in a competitive global economy: A retirement lecture in honor of Professor (Mrs) Grace Mbipom* (p. 21).

Babalola, J. B. (2008). *Modeling Nigerian university system for effective learning and global relevance: Past, present and perspective* (p. 75). A Wemark Publishers. Jerry Commercial Productions, Calabar, Nigeria.

Boateng, K., & Ofori-Sarpong, E. (2002). *An analytical study of the labor market for tertiary graduates in Ghana* (p. 88). World Bank/National Council for Tertiary Education and the National Accreditation Board Project.

Brown, P., Halsey, A. H., Lauder, H., & Wells, A. S. (1997). *The transformation of education and society: An introduction* (p. 165). O.U.P. UK.

Dabalen, A., Oni, B., & Adekola, O. A. (2000). *Labor market prospects for university graduates in Nigeria* (p. 55). Background Study for the Nigeria University System Innovation Project.

De Grip, A. (2008). Job-worker mismatch and cognitive decline. *Oxford Economic Papers, 60*(2), 237-253.

Frogner, M. L. (2002). Labor market trends: Skill shortages. *Special feature* (pp. 17-27). Office for National Statistics Publications, SWIV 2QQ, United Kingdom.

Handel, J. (2005). *Worker skills and job requirements: Is there a mismatch?* (p. 98). Washington, D. C.: Economic Policy Institute.

Longe, R. S. (1999). *Investment in Nigerian education: Relevance, quality and governance at the eve of the third millennium—Inaugural lecture* (p. 66). Faculty of Education, University of Ibadan, Ibadan.

NUC (National Universities Commission) (2004). Labor market expectations of Nigerian graduates. *Report of National Needs Assessment Surveys* (p. 174). Abuja, Nigeria.

Pauw, K., Ooshuizen, M., & Westhuizen, C. V. (2007). Graduate unemployment in the face of skills shortages: A labor market paradox. *Development Policy Research Unit (DPRU) Working Policy Brief Series, 6,* 2-9. Retrieved June 6, 2009, http://papers.ssrn.com/sol 13 papers. cfm? abstract id = 964899

Proctor, R. W., & Dutta, A. (1995). *Skill acquisition and human performance* (p. 156). Thousand Oaks, C. A.: Sage.

Saint, W., Hartnett, T. A., & Strassner, E. (2004). Higher education in Nigeria: A status report. *World Education News & Reviews (WENR)* (pp. 1-17). Retrieved August 11, 2006, from http://www.wes.org