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Assessment of Competencies of Professional Librarians in Nigeria.

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Abstract

This paper traced origin of library and information science education in Nigeria to the advent of new technologies in academic libraries. It investigated professional competencies that are currently expected of library professionals in academic libraries. The population comprised 89 professionals in South East of Nigeria Federal Universities. Copies of a structured questionnaire were used for data collection from respondents. Sixty-three (63) responses were received giving a response rate of 70.79%. The study centered on knowledge-based and skills'-based acquisition. It also presented qualitative treatment of attitude. Data collected were analyzed using percentages, mean scores and correlation coefficient. Findings of the study showed positive correlation between acquired and applied knowledge from library school and place of work respectively but found no correlation between acquired and applied skills from library school and place of work respectively. Elements of knowledge such as metadata development, software development and digital technologies were acquired from library school by 44.54%, 30.17% and 14.10% of professionals respectively. Skills such as website development, web page design, web page maintenance and database management were acquired from library school by 25.17%, 15.66%, 15.66% and 30.17% of professionals respectively. The paper recommended revision of library schools' curricula to make the content reflect prevailing demands of the labour market.

Keywords: Academic libraries, Professional Librarians, Assessment, Professional Competencies and Nigeria.

1.0 Introduction:

Saleh (2012) pointed out that library education “was tied up with general, social and political history of the country and as such, those who aspired to become Librarians went to Britain to qualify for the Associate of the Library Association (ALA)” (p.1). Prior to 1960, “the Carnegie Corporation sponsored two studies in 1939 and 1940 to survey the library needs of West Africa with a view to formalizing its training programme” (Saleh, 2012, p.1). Awareness in library profession in Nigeria was buttressed by the arrival of John Harris as the Librarian of the University College Ibadan in 1948 (Saleh, 2012). Harris was not only instrumental to the development of University College Library but also “organized the Native Authority Libraries in 1950, the first organized library training course” (Saleh, 2012, p.2). These pioneering efforts stimulated successive activities geared toward professional librarianship and library education in Nigeria. Thus, “ in 1952, Joan Allen organized library training course for reading room attendants under the Northern Regional Library service, while the Eastern Regional Library Board which was created in 1935, introduced a training course for Library Assistants in 1956” (Saleh, 2012, p.2). In 1953, UNESCO Seminar on Public Library Development in Africa was held at Ibadan (Saleh, 2012). The Seminar provided stimulus to the establishment of modern libraries in Nigeria. It also created a floodgate for establishment of library schools in the country. The first library school which was established at University of

Ibadan in 1960 began with one year basic professional programme leading to the award of a post-graduate diploma. A second library school was set up at Ahmadu Bello University Zaria in 1968. It mounted undergraduate programmes leading to award of Bachelor of Library Science (Saleh, 2012). A third library school was also set up at University of Nigeria, Nsukka in 1983. It also mounted undergraduate programmes leading to award of Bachelor of Library Science. As the need arose for more library professionals, other Library schools were founded in Federal, State and Private Universities, Polytechnics and Colleges of Education in Nigeria.

These Library Institutions were raised to offer mainly traditional librarianship education. Presently, their products have to contend with emerging information technologies. These technologies demand acquisition of necessary competencies to enable library professionals remain relevant in the world of information profession.

1.1 Competencies:

Marshall et al. (2003) define competencies as, “the interplay of knowledge, understanding, skills and attitudes required to do a job effectively from the point of view of both the performer and the observer” (p.1). They identified two types of competencies for special Librarians. The first are professional competencies which relate to knowledge in the areas of information resources access, technology, management and research and the ability to use these areas of knowledge to provide library and information services. The other comprises personal competencies which represent a set of skills, attitudes and values “that enable librarians to work effectively, be good communicators, be able to focus on continuing learning throughout their careers, be able to demonstrate the value added nature of their contributions, and survive in the new world of work” (Marshall et al., 2003, p.2). Gulati and Raina (2000) added unique competencies of the librarian to include in-depth knowledge of print and electronic information resources in management of information services that meet strategic information needs of the individual or group being served. Canadian Association of Research Libraries (CARL) (2010) defines competencies for a profession as, “a list or group of a series of knowledge, skills, abilities and behaviours that define and contribute to performance.” (p.5). Choi and Rasmussen (2006) and Ferreira et al. (2007) concur that competencies comprise knowledge, skills (abilities) and attitudes. They pointed out that knowledge should be acquired through formal education and training, while abilities could be acquired through practice CARL (2010) presents holistic compendium of competencies for librarians working in an intense research environment. The competencies are encapsulated under seven areas of the following

1. foundational knowledge
2. interpersonal skills
3. leadership and management
4. collections development
5. information literacy
6. research and contributions to the profession and
- 7 information technology skills.

Attitude : Component of Competencies

Jordan (2011) contended that competencies comprised knowledge, skills, abilities and less tangibly measurable attainments important to a library manager. Other contemporary Library and Information Science professionals such as (Patridge, Lee & Munro, 2010 ; Hayati, 2008 ; Cullen, 2008 ; Ferreira et al., 2007 ; Cohen, 2006 ; Khoo, 2005 ; & Abels et al., 2003) have articulated that competencies comprise knowledge, skills and attitudes.

Ahmed and Yassen (2009) defined attitude as, “ a person’s tendency to feel and behave in a particular manner toward an object, a person or an organization” (p.6). Attitude is composed of three aspects namely, cognitive, effective and behavioural. Among these, only behavioural which refers to the action aspect can be observed. The cognitive aspect refers to beliefs, perceptions and ideas about a person, object or situation. Effective aspects refer to the feelings and emotions (Ahmed & Yassen, 2009). Huang and Lai (2009) asserted that attitude should involve appreciation of students’ needs; clientele focus; showcasing of enthusiasm for working in the library and manifestation of intellectual curiosity. Hirsh (2012) opines that positive attitude of librarians should include demonstration of ability to adapt to a changing library environment, while Khoo (2005) reels out nineteen attitudes expected of librarians.

These competencies are compelling on librarians.. Although the essential roles of librarians have not changed since the central mandate continues to be bringing information seekers and information sources together, the environment within which they execute their mission has changed dramatically. Researchers are turning away from traditional libraries in favour of emerging digital/electronic libraries. New and more sophisticated information and communication technology products are being introduced and appropriated into the profession. Students arrive on campus with their information seeking habits of new sources and new technologies. “Transformation technologies and the behaviours they engender have rapidly changed the creation and distribution of scholarly journals, data and other research outputs” (Ross & Pongracz, 2008, p.145). The study brings to the fore, the critical issues involved in meeting the challenges faced by academic librarians. It behooves on this category of librarians to reflect on their acquired competencies and address any observed shortcomings. Within the country and within our institutions, the roles of librarians are being re-assessed and this paper hopes to provide that re-assessment with respect to librarians’ acquired competencies.

I.2 Statement of the Problem

Ferreira et al. (2007) pointed out that, “knowledge could be acquired through formal education and training” (p.3). They also observed from their study of core library professional competencies in Brazil and in contemporary society that, “there is a gap between the knowledge acquired from library schools and those required by the labour market” (p.2). This situation becomes critical in an event where they (the products) have to compete with other professionals in the information arena (Khoo, 2005). Secondly, students (undergraduates and postgraduates) arrive on campus with their information seeking habits and strategies already formed and with experience in a host of new sources

and technologies. In some cases their requests for information are not always satisfactorily delivered. In addition to their traditional library skills and knowledge, many practicing professional librarians are expected to possess additional knowledge and skills required to work within the library world. It is in this connection that this study tried to investigate competencies which have been acquired by library professionals as the outcome can help them address their shortcomings.

1.3 Objectives of the Study:

Objectives of the study are to:

1. Find out knowledge-based competencies acquired from library schools by professional librarians.
2. Investigate extent of application of knowledge-based competencies by professional librarians in the discharge of their duties
3. Investigate if there is correlation between acquired and applied knowledge from library school and place of work respectively
4. Find out skills'-based competencies acquired from library schools by professional librarians.
5. Investigate extent of application of skills'-based competencies by professional librarians in the discharge of their duties.
6. Investigate if there is correlation between acquired and applied skills from library school and place of work respectively
7. Identify knowledge-based challenges encountered by professional librarians in the execution of their duties with respect to competencies
8. Identify skills'-based challenges encountered by professional librarians in the execution of their duties with respect to competencies.
9. Identify strategies to enhance competencies of professional librarians

2.0 Literature Review

2.1 Components of competencies

The paper reviewed literature on professional competencies expected of library professionals in the 21st century. Whitlatch et al. (2003) describe competencies as, "behaviors that excellent performers exhibit more consistently and effectively than average performers and that these competencies are focused on abilities, skills and knowledge" (p.1). Ferreira et al. (2007) believe that competencies comprise three elements, knowledge, skills or abilities and attitudes, while Abels et al. (2003) opine that information professionals require two types of competencies namely, professional competencies which relate to practitioners' knowledge of information resources, access, technology and management. They state that others are personal competencies which represent a set of attitudes, skills and values that enable practitioners work effectively. Canadian Association of Research Libraries (2010) reeled out seven areas of competencies designed specially for academic librarians. They are foundational knowledge, interpersonal skills, leadership and management, collections development, information literacy, research and contributions to the profession and information technology skills.

2.1.1 Empirical study on Knowledge and skills' component of competencies

Choi and Rasmussen (2006) employed survey method to identify perception of the knowledge and skills important in performing the job of digital librarians. Copies of the survey questionnaire were distributed to 123 directors who were members of Association of Research Libraries (ARL). They had 45 responses from 39 libraries. Their respondents rated five highest important skills and knowledge required in performing their work as, communication and interpersonal skills, project management, leadership skills, understanding of digital library architecture and software, knowledge of the needs of users, and knowledge of technical and quality standards. Respondents were also asked to indicate the most relevant/valuable courses they had taken in library and information science school for performing their current work. The most frequently mentioned courses were in the areas of cataloguing, collections development and management, systems analysis and information technology.. Respondents were also asked to identify areas for which their education and training had not prepared them adequately. They (respondents) indicated overall understanding of the complex interplay of software, lack of vocabulary to communicate to technical staff, knowledge of web-related languages and technologies, web design, digital imaging and formatting, XML standards and technologies among others. Concluding the findings in their survey, Chio and Rasmussen (2006), opined that professionals should be required to have more breadth and depth of knowledge, and skills across the dimensions of professional training on management skills through practical experience. Chio and Rasmussen (2006), Hashim and Mokhtar (2005), Chowdhury and Chowdhury ((2003) and Tanner (2001) affirmed that library professionals needed to develop strong interpersonal and team-work skills. They concurred that practical skills, experience with digital collections management and digital technologies should be integrated into library schools' curricula..

Ferreira et al. (2007) conducted a survey using sixty graduates who were employed as information professionals. They found out that knowledge acquired by their respondents through academic education were cataloguing, classification, indexing, reference services and a host of other courses which emphasized traditional librarianship. They also listed skills which their respondents considered necessary but were not acquired during academic work as: skills relating to information and communication technologies, interpersonal relations, management of information units, technical knowledge, research methodology and leadership and management skills.

2.1.2 Empirical study on attitudes' component of competencies

Haddock (2010) opines that librarians' attitude should include behaving in a non-racist , non-sexist and professional manner ; creating a library environment conducive to learning; ensuring that students know what they are doing and contributing to professional development programmes.

Hayati (2008) investigated attitude of library and information professionals in Iranian Public Libraries. His questionnaire instrument contained seventeen items. Result showed that attitudes such as being initiative; having foresight; being responsible, patient and motivated had highest mean scores. Other attitudes such as being informed of

political, social, cultural and technological events; having positive disposition toward library environmental changes and being realistic had lowest mean scores.

Cohen (2006) moved the focus of the discourse to the attitude that a successful librarian in the 2.0 world must possess. He articulates them as willingness to go where users are; taking an experimental approach and willingness to make mistakes.

Patridge, Lee and Munro (2010) investigated attitudes of LIS professionals in a web 2.0 world in Australia. Focus groups and interviews were used for data collection. Participants were drawn from public, including State and National, academic, school, government and special libraries, LIS education and LIS employment services. Eighty-one subjects participated in the study. Among their results, personality traits such as having vision, being creative, adaptable, flexible, persistent and resilient emerged critical to being librarian 2.0.

3.0 Methodology

The study was a descriptive survey designed to obtain data which would identify competencies needed by professional/academic librarians in carrying out their functions. The research covered Federal University Libraries in South East Nigeria. They are Federal University of Technology Owerri (FUTO) (20) University of Nigeria, Nsukka (50), Nnamdi Azikiwe University Awka (11) and Michael Okpara University of Agriculture Umudike (8) The population comprised 89 library professionals .

Copies of a structured questionnaire which contained 92 items were used for data collection. Cronbach Alpha reliability coefficient was used to establish the reliability of the instrument at 0.76. The instrument contained two sections. Section A was on respondents' profile while section B was on competencies. A total of 89 copies of the questionnaire were distributed and 63 responses were received giving a response rate of 70.79%. (FUTO=16; UNN = 34; UNIZIK, 8 and Michael Okpara Umudike 5) All of the returned copies of the questionnaires were found usable. Scoring of items in section B was based on a four-point weighting scale. Analysis of the items was done using percentages, mean scores and correlation coefficient. Items that had percentages of 50 and above and mean scores of 2.5 and above were accepted. In this study, academic librarians and professional librarians were used interchangeably

4.0 Results and Analysis of Results

4.1 Demographic Information : Libraries

Table 1 (a) Qualification of Respondents Presented in Percentages

S/N	Qualification	FUTO	MOUAU	UNN	UNIZIK	Total	% of Q
1	BLS	7		6	-	13	20.64
2	MLS	9	5	21	8	43	68.25
3	Ph.D			7		7	11.11
	Total	16	5	34	8	63	100.00

KEY: FUTO= Federal University of Technology, Owerri

MOUAU = Michael Okpara University of Agriculture, Umudike

UNN = University of Nigeria, Nsukka.

UNIZIK = Nnamdi Azikiwe University, Awka.

% of Q = Percentage of each qualification

Table 1 (a) shows that respondents who have MLS are in the majority (68.25%). This is understandable since this section of the study deals with professionals/academic librarians who are required to obtain MLS certificate in order to become chartered professional librarians. The findings agree with the result of Choi and Rasmussen's (2006) study. They found that most of their respondents had MLS degree.

Table 1 (b) Years of Practice of Respondents.

S/N	Years of practice	FUTO	MOUAU	UNN	UNIZIK	Total	% of Y
1)	1 – 5	4	2	8	-	14	22.22
2)	6 – 10	2	1	6	2	11	17.46
3)	11 – 15	4	2	6	2	14	22.22
4)	16 – 20	2	-	6	3	11	17.46
5)	21 – 25	2	-	4	-	6	9.53
6)	26 – 30	1	-	2	-	3	4.76
7)	31 and above	1	-	2	1	4	6.35
	Total	16	5	34	8	63	100.00

Key: % of Y = Percentage of number of respondents in each category of years of practice to the total number of academic librarians/Professional librarians

Table 1 (b) shows no dominance of the number of professionals in any category. The finding differs from the result of Choi and Rasmussen (2006) and that of Ferreira et al. (2007) where a particular category dominated.

Table 1 (c) Position/Status of Professional Librarians

S/N	Position/Status	FUTO	MOUAU	UNN	UNIZIK	Total	% of P
1)	Assistant librarian	3	3	8	-	14	22.22
2)	Librarian II	2	1	2	-	5	7.94
3)	Librarian I	3	1	6	2	12	19.05
4)	Senior librarian	3	-	7	4	14	22.22
5)	Principal librarian	3	-	9	1	13	20.63
6)	Deputy librarian	2	-	2	-	4	6.35
7)	Librarian	-	-	-	1	1	1.59
	Total	16	5	34	8	63	100.00

Key:

:% of P = Percentage of number in each status to total number of professional librarians.

Table 1 (c) also shows no dominant number of professionals in each position. However, the position of the librarian which has the least percentage (1.59%) could result from the pyramidal organizational structure of the profession which allows one university librarian per university.

4.2 Competencies.

Table 2 (a) Percentage of Professional Librarians Who Acquired Knowledge-Based Competencies from Library Schools.

S/ N	Knowledge- Based Competencies	FUTO %	MOUUAU %	UNN %	UNIZIK %	Cumulative % Average	Accepted or Not Accepted
1	Theoretical themes that are relevant in the field of information	100	100	100	100	100	A
2	Theoretical themes that are growing in the field of information	87.50	100	76.47	100	90.99	A
3	Bibliometrics	75.00	80	64.71	100	79.93	A
4	Patron engagement	75.00	80	52.94	100	76.99	A
5	The influence of technology on the structure of information	100	100	70.59	80	87.65	A
6	Copyright and intellectual property law	93.75	100	76.47	86	89.06	A
7	Evaluation of information and communication tools' interfaces	75.00	100	70.59	80	81.40	A
8	Use of information and communication technologies in records management	81.25	100	58.82	75	78.77	A
9	Information management	93.75	100	82.35	100	94.03	A
10	Knowledge management	93.75	100	82.35	100	94.03	A
11	Virtual librarianship	68.75	100	58.82	50	69.39	A
12	Online cataloguing	56.25	80	52.94	25	53.55	A
13	Metadata development	43.75	80	29.41	25	44.54	N.A.
14	Software development	31.25	60	29.41	0	30.17	N.A.
15	Digital technologies such as OAI –PMH and XML	18.75	20	17.64	0	14.10	N.A.

16	User studies/scholarly communication	100.00	100	94.12	100	98.53	A
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Key

A = Accepted

NA = Not Accepted

Table 2 (a) shows that metadata development, software development, and digital technologies such as OAI-PMH and XML were acquired by 44.54%, 30.17% and 14.10% respectively by library professionals from the library schools generally. However, a critical look at online cataloguing reveals that only 25% of UNIZIK professionals were exposed to online cataloguing while in library school. These less-acquired knowledge-based competencies are critical in the constitution of curricula for librarianship studies. They make the difference between traditional and digital/electronic library practice of the 21st century. They also provide enabling latitude for library graduates' professional roles in the job market. The findings are in accordance with observations of Gulati and Raina (2000), Khoo (2005), Choi and Rasmussen (2006) and Ferreira et al. (2007).

Table 2 (b) Mean Scores of Extent of Acquisition of Knowledge-Based Competencies from Library School by Professional Librarians.

S/ N	Knowledge-Based Competencies	FUTO X ⁻	MOUA UX ⁻	UNN X ⁻	UNIZI KX ⁻	Average Mean X ⁻	Accepted or Not Accepted
1	Theoretical themes that are relevant in the field of information	3.12	3.40	3.12	3.75	3.35	A
2	Theoretical themes that are growing in the field of information	3.00	3.20	2.88	3.50	3.15	A
3	Bibliometrics	2.65	3.00	2.53	2.75	2.73	A
4	Patron engagement	3.12	3.20	3.06	3.00	3.10	A
5	The influence of technology on the structure of information	3.20	3.40	2.82	3.50	3.23	A
6	Copyright and intellectual property law	2.60	3.00	2.70	2.00	2.58	A
7	Evaluation of information and communication tools' interfaces	2.65	3.20	2.70	2.75	2.83	A
8	Use of information and communication technologies in records management	2.85	3.00	2.82	2.75	2.89	A
9	Information management	2.85	3.00	2.47	2.75	2.77	A
10	Knowledge management	3.00	2.80	3.00	3.00	2.95	A

11	Virtual librarianship	2.80	2.80	2.70	3.00.	2.83	A
12	Online cataloguing	2.60	2.60	2.94	2.25	2.60	A
13	Metadata development	2.60	2.60	2.12	2.00	2.33	NA
14	Software development	2.00	2.40	2.12	1.25	1.94	NA
15	Digital technologies such as OAI –PMH and XML	2.00	2.40	2.12	1.25	1.94	NA
16	User studies/scholarly communication	3.20	3.60	2.82	3.50	3.28	A

Key: A = Accepted ; NA = Not Accepted

In Table 2 (b) respondents were required to indicate the extent of acquisition of knowledge-based competencies from library school. Findings showed that metadata development, software development and digital technologies had unacceptable mean scores. The finding agrees with Ferreira et al. (2007)'s study. They reported that respondents showed insufficient acquisition of ICT elements of knowledge from library school.

Table 2 (b) (i) Mean Scores of Extent of Application of Knowledge-Based Competencies by Professional Librarians in the Discharge of their Duties

S/N	Knowledge-Based Competencies	FUTO X [̄]	MOUA UX [̄]	UNN X [̄]	UNIZI KX [̄]	Average Mean X [̄]	Accepted or Not Accepted
1	Theoretical themes that are relevant in the field of information	3.20	3.60	3.18	4.00	3.50	A
2	Theoretical themes that are growing in the field of information	3.12	3.40	3.00	3.75	3.32	A
3	Bibliometrics	2.85	3.20	2.53	3.00	2.90	A
4	Patron engagement	3.20	3.40	3.12	3.50	3.31	A
5	The influence of technology on the structure of information	3.50	3.60	2.88	3.75	3.43	A
6	Copyright and intellectual property law	2.60	3.20	2.82	2.00	2.66	A
7	Evaluation of information and communication tools' interfaces	2.80	3.40	2.82	2.75	2.94	A
8	Use of information and communication technologies in records management	3.00	3.20	2.94	2.75	2.97	A
9	Information management	3.00	3.20	2.47	3.00	2.92	A

10	Knowledge management	3.20	3.00	3.06	3.00	3.07	A
11	Virtual librarianship	2.85	3.00	2.70	3.00	2.89	A
12	Online cataloguing	2.65	2.80	3.00	2.25	2.68	A
13	Metadata development	2.60	2.60	2.12	2.25	2.39	NA
14	Software development	2.00	2.40	2.18	1.25	1.96	NA
15	Digital technologies such as OAI –PMH and XML	2.00	2.40	2.18	1.25	1.96	NA
16	User studies/scholarly communication	3.50	3.80	2.88	3.75	3.48	A

Key: A = Accepted

N.A. = Not Accepted

In Table 2 (b) (i) respondents were asked to indicate the extent they applied knowledge-based competencies which they acquired in library school. Findings showed that metadata development, software development and digital technologies such as OAI-PMH and XML were rarely applied in the discharge of their duties and such competencies had unacceptable mean scores. The implication is that these professionals lacked sufficient education and training in ICT-related library courses. There is observable correlation between knowledge-based competencies acquired from library schools and those applied by these respondents in discharging their duties.

Table 2 (b) (ii) Computation of Correlation Coefficient of Acquired and Applied Knowledge Scores from Library School and Place of Work Respectively

S/N of elements of knowledge	Acquired. Table 2(b) x	Applied Table 2(b) (i) y	$x_1 - \bar{x}$	$y_1 - \bar{y}$	$(x_1 - \bar{x})^2$	$(y_1 - \bar{y})^2$	$(x_1 - \bar{x})(y_1 - \bar{y})$
1	3.35	3.50	0.57	0.6	0.32	0.36	0.34
2	3.15	3.52	0.37	0.42	0.14	0.18	0.16
3	2.73	2.90	-0.05	0.00	0.003	0.00	0.00
4	3.10	3.31	0.32	0.41	0.10	0.17	0.13
5	3.23	3.43	0.45	0.53	0.20	0.28	0.24
6	2.58	2.66	-0.20	-0.24	0.04	0.06	0.05
7	2.83	2.94	0.05	0.04	0.003	0.002	0.002
8	2.89	2.97	0.11	0.07	0.01	0.005	0.008
9	2.77	2.92	-0.01	0.02	0.00	0.0004	-0.0002
10	2.95	3.07	0.17	0.17	0.03	0.03	0.03
11	2.83	2.89	0.05	-0.01	0.003	0.0001	-0.0005
12	2.60	2.68	-0.18	-0.18	0.03	0.03	0.03
13	2.33	2.39	-0.45	-0.51	0.20	0.26	0.23
14	1.94	1.96	-0.84	-0.94	0.71	0.88	0.79
15	1.94	1.96	-0.84	-0.94	0.71	0.88	0.79
16	3.28	3.48	0.50	0.58	0.25	0.34	0.29

Total	44.50	46.38	0.02	-0.52	2.7485	3.4775	3.0893
Grand Mean	2.78	2.90					

A descriptive statistic for bivariate numerical data is the Correlation Coefficient. It is designated by r

Where $r = \frac{S_{xy}}{S_x S_y}$;

$$S_x = \sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 / n - 1} \quad ; \quad S_y = \sqrt{\sum_{i=1}^n (y_i - \bar{y})^2 / n - 1}$$

$$\text{and } S_{xy} = \sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y}) / n - 1$$

$$S_x = \sqrt{(2.7485/16-1)} = \sqrt{(2.7485/15)} = 0.4280576285186$$

$$S_y = \sqrt{(3.4775/16-1)} = \sqrt{(3.4775/15)} = 0.4814907406517$$

$$S_{xy} = \frac{3.0893}{16-1} = \frac{3.0893}{15} = 0.2059533333333$$

$$r = \frac{S_{xy}}{S_x S_y} = \frac{0.2059533333333}{0.4280576285186 \times 0.4814907406517} = 0.9$$

The result showed positive correlation between acquired and applied knowledge from library school and place of work respectively

Table 2 (c) Percentage of Professional Librarians Who Acquired Skills'-Based Competencies from Library Schools

S/N	Skills'-Based Competencies	FUTO	MOUA U	UNN	UNIZI K	Cumulative % Average	Accepted or Not Accepted
1	Change management	75.00	80	29.41	100	71.10	A
2	Library marketing expertise	75.00	80	52.94	80	71.99	A
3	Presentation skills	81.25	80	70.58	100	82.96	A
4	Leadership skills	87.50	100	76.47	100	90.99	A
5	Human resources development skills	93.25	100	70.58	100	91.08	A
6	Risk management	68.75	60	58.82	75	65.64	A
7	Project management	68.75	80	41.18	75	66.23	A
8	Collections development and management	93.75	100	82.35	100	94.03	A
9	Active participation in	93.75	100	64.71	100	89.62	A

	library professional activities						
10	Commitment to learning and teaching	87.50	100	76.47	100	90.99	A
11	Contribution to library professional research and publications	100.00	100	82.35	100	95.59	A
12	Electronic resources management	56.25	100	52.94	20	57.30	A
13	Website development skill	31.25	20	29.41	20	25.17	N.A.
14	Web page design	25.00	20	17.64	0	15.66	N.A.
15	Web page maintenance	25.00	20	17.64	0	15.66	N.A.
16	Database management	31.25	40	29.41	20	30.17	N.A.
17	Communications' skill	100.00	100	82.35	100	95.59	A

Key: A = Accepted

NA = Not Accepted

Table 2 (c) shows that website development , web page design, web page maintenance and database management skills were acquired by 25.17%, 15.66%, 15.66% and 30.17% library professionals respectively, while they were in the library school. These percentages are below acceptable level. These core skills are needed to enable librarians survive in the global environment which is replete with new library technologies. These findings are in consonance with the findings in Khoo's (2005) survey and Chowdhury and Chowdhury (2011) observations

Table 2 (d) Mean Scores of Extent of Acquisition of Skills'-Based Competencies from Library School by Respondents

S/N	Skills'-Based Competencies	FUTO X	MOUA U X	UNN X	UNIZI K X	Average mean X	Accepted or Not Accepted
1	Change management	3.40	3.20	2.71	3.75	3.26	A
2	Library marketing expertise	2.75	2.80	2.64	3.25	2.86	A
3	Presentation skills	3.25	3.40	2.88	3.50	3.26	A
4	Leadership skills	3.50	3.20	3.18	3.75	3.40	
5	Human resources development skills	3.50	3.20	3.00	3.75	3.40	A
6	Risk management	3.00	3.00	2.65	2.75	2.85	A
7	Project management	3.00	3.00	2.82	3.00	2.96	A
8	Collections development and management	3.25	3.20	3.18	3.72	3.34	A
9	Active participation in library professional activities	3.25	3.40	3.00	3.75	3.35	A

10	Commitment to learning and teaching	3.50	3.80	3.24	3.75	3.57	A
11	Contribution to library professional research and publications	3.50	3.60	3.24	3.50	3.46	A
12	Electronic resources management	2.75	3.40	2.64	2.75	2.89	A
13	Web site development skill	2.00	2.40	2.00	2.75	2.29	NA.
14	Web page design	2.00	2.40	2.00	1.50	1.98	N.A.
15	Web page maintenance	2.00	2.20	2.00	1.50	1.93	N.A.
16	Database management	2.25	2.80	2.64	2.25	2.49	N.A.
17	Communications' skill	3.50	3.60	2.88	3.50	3.37	A

Key: A = Accepted

NA = Not Accepted

Table 2 (d) showed that elements of skill acquired from library school such as web site development, web page design, web page maintenance and database management had unacceptable mean scores. The result agrees with Ferreira et al. (2007) 's finding in which their respondents had low mean scores in elements of skill relating to website and digital technologies. Both Saleh (2012) and Ferreira et al. (2007) observe that fresh graduates lack confidence when assigned professional responsibilities due to inadequate acquisition of skills from library school.

Table 2 (d) (i) Mean Scores of Extent of Application of Skills'-Based Competencies by Respondents in Discharging their Duties

S/N	Skills'-Based Competencies	FUTO X̄	MOUA U X̄	UNN X̄	UNIZI K X̄	Average mean X̄	Accepted or Not Accepted
1	Change management	3.50	3.40	2.82	4.00	3.43	A
2	Library marketing expertise	3.00	3.00	2.65	3.50	3.04	A
3	Presentation skills	3.50	3.60	2.94	3.75	3.45	A
4	Leadership skills	3.75	3.40	3.18	4.00	3.58	A
5	Human resources development skills	3.75	3.40	3.18	4.00	3.58	A
6	Risk management	3.25	3.20	2.88	3.00	3.08	A
7	Project management	3.25	3.20	2.82	3.25	3.13	A
8	Collections development and management	3.50	3.40	3.24	3.75	3.47	A
9	Active participation in	3.50	3.60	3.18	4.00	3.57	A

library professional activities							
10	Commitment to learning and teaching	3.75	4.00	3.29	4.00	3.76	A
11	Contribution to library professional research and publications	3.75	3.80	3.24	3.75	3.64	A
12	Electronic resources management	3.00	3.60	2.64	2.75	2.99	A
13	Web site development skill	2.25	2.40	2.00	3.00	2.41	NA.
14	Web page design	2.25	2.40	2.12	1.50	2.06	N.A.
15	Web page maintenance	2.00	2.40	2.05	1.50	1.99	N.A.
16	Database management	2.75	2.80	2.71	2.25	2.63	A
17	Communications' skill	3.75	3.80	3.00	3.75	3.58	A

Key: A = Accepted

NA = Not Accepted

Table 2 (d) shows that extent of application of website development, web page design and web page maintenance by respondents in their various institutions is below expectation. Hashim and Mokhtar (2005) also observed these lapses among library professionals. Poor application of these skills could result from the fact that these skills were either not acquired from the library schools or that the professionals were not exposed to challenging opportunities that demanded such skills. Similarly, these respondents who did not acquire database management to appreciable degree from their library school as shown in Table 2 (c), must have had either challenging opportunities or could have benefited from staff or self development programme from which they later improved on the skill. The situation is manifested in Table 2 (d) item 16 where respondents had mean score of 2.63 (which is above criterion mean of 2.5) in application of database management.

Table 2 (d) (ii) Computation of Correlation Coefficient of Acquired and Applied Skills' Scores from Library School and Place of Work Respectively

S/N of elements of skill	Acquired. Table 2(d) x	Applied Table 2(d) (i) y	$x_1 - \bar{x}$	$y_1 - \bar{y}$	$(x_1 - \bar{x})^2$	$(y_1 - \bar{y})^2$	$(x_1 - \bar{x})(y_1 - \bar{y})$
1	3.26	3.43	0.43	0.29	0.18	0.08	0.12
2	2.86	3.04	0.03	-0.10	0.001	0.01	0.00
3	3.26	3.45	0.43	0.31	0.18	0.10	0.13
4	3.40	3.58	0.57	0.44	0.32	0.19	0.25
5	3.40	3.58	0.57	0.44	0.32	0.19	0.25

6	2.85	3.08	0.02	-0.06	0.0004	0.004	0.00
7	2.96	3.13	0.13	-0.01	0.02	0.0001	-0.00
8	3.34	3.47	0.51	0.33	0.26	0.11	0.17
9	3.35	3.57	0.52	0.43	0.27	0.19	0.22
10	3.57	3.76	0.74	0.62	0.55	0.38	0.46
11	3.46	3.64	0.63	0.50	0.40	0.25	0.32
12	2.89	2.99	0.06	-0.15	0.004	0.02	0.01
13	2.29	2.41	-0.54	-0.73	0.29	0.53	0.39
14	1.98	2.06	-0.85	-1.08	0.72	1.17	0.91
15	1.93	1.99	-0.90	-1.15	0.81	1.32	1.03
16	2.49	2.63	-0.34	-0.51	0.12	0.26	0.17
17	3.37	3.58	0.54	0.44	0.29	0.194	0.23
Total	48.12	53.39	2.55	0.03	4.7354	4.4181	4.66
Grand Mean	2.83	3.14					

From Table 2 (d) (ii) :

$$S_x = \sqrt{(4.7354/17-1)} = \sqrt{(4.7354/16)} = 0.544$$

$$S_y = \sqrt{(4.4181/17-1)} = \sqrt{(4.4181/16)} = 0.5255$$

$$S_{xy} = \frac{4.66}{17-1} = \frac{4.66}{16} = 0.29125$$

$$r = \frac{S_{xy}}{S_x S_y} = \frac{0.29125}{0.544 \times 0.5255} = \frac{0.29125}{0.28588} = 1.019$$

Since r should not be more than 1, the result was interpreted as indicating no correlation between acquired and applied skills from library school and place of work respectively. This is buttressed by the fact that “library schools do not prepare students perfectly with all the skills they will need on the job” (Ferreira et al. , 2007, p.15). Individuals are also responsible for development of their skills and “many of these skills are neither acquired in the school nor immediately on the job” (Saleh, 2012, p.7).

Table 3 (a) Mean Scores of Knowledge-Based Challenges Encountered by Professional Librarians in the Execution of their Duties.

S/ N	Knowledge-Based Challenges	FUTO \bar{X}	MOUAU \bar{X}	UNN \bar{X}	UNIZIK \bar{X}	Average Mean \bar{X}	Accepted or Not Accepted
1	I do not understand bibliometrics and its application to library	2.75	2.60	2.88	2.25	2.62	A
2	There are inadequate teaching practices	3.00	3.40	3.00	2.50	2.98	A
3	There is lack of knowledge of	3.00	3.00	2.94	2.50	2.86	A

	new products and services mediated by ICTs						
4	There is absence of internship	2.75	2.80	2.47	2.50	2.63	A
5	There is inadequate education of librarians in digital technology	3.50	3.40	3.18	3.75	3.46	A
6	The internships do not expose students to the experiences and practices of the state of the art in librarianship	2.75	3.20	2.56	2.65	2.79	A

Table 3 (a) shows that respondents accepted all the listed items as knowledge-based challenges confronted by professionals. Choi and Rasmussen (2006) also identified these knowledge-based challenges among findings of their study. Total agreement with the listed challenges by respondents could be a reflection of non-currency of library schools' curricula as opined by Chiware ((2007) and Saleh (2012), or as a result of shortage of mentors as revealed by Tennant (2002).

Table 3 (b) Mean Scores of Skills'-Based Challenges Encountered by Professional Librarians in the Execution of their Duties.

S/N	Skills'-Based Challenges	FUTO \bar{X}	MOUUAU \bar{X}	UNN \bar{X}	UNIZIK \bar{X}	Average mean	Accepted or Not Accepted
1	Lack of command of information and communication technologies' product in relation to library services	2.75	1.80	2.88	3.00	2.61	A
2	Difficulty in relating theory to practice	2.25	1.40	2.35	2.75	2.18	NA
3	Marketing library services	2.50	1.80	2.24	3.50	2.51	A
4	Lack of technical knowledge of web page development	3.25	2.80	3.18	3.75	3.25	A
5	Lack of skill to manage information unit	2.50	2.00	2.82	2.75	2.52	A
6	Lack of change management skill	2.50	2.20	2.65	2.50	2.46	NA
7	Lack of trouble-shooting experience skill with respect to	3.00	2.20	3.41	3.75	3.09	A

computer technology								
8	Lack of skill in website development	3.25	4.00	2.65	3.25	3.29	A	
9	Inability to write a proposal for development of a digital library	2.75	2.20	3.00	3.50	2.86	A	
10	Inability to conduct project evaluation and outcomes and assessment	2.75	2.20	2.71	3.50	2.79	A	
11	Inability to perform grant writing generally	2.25	2.00	2.71	2.75	2.43	NA	
12	Inability to manage institutional repositories	2.50	2.40	2.94	2.25	2.52	A	

Table 3 (b) illustrated that skills-based challenges such as difficulty in relating theory to practice, lack of change management skills and inability to write grant proposals were not accepted as challenges encountered by academic librarians in the course of executing their duties. Respondents' refusal buttressed the fact that South East Librarians benefitted from industrial attachment training where they honed their skills' ability during their library school's days. The findings are at variance with the findings of Ferreira et al. (2007) 's study which accepted them as skills'-based challenges faced by professional librarians.

Table 4 Mean Scores of Strategies to Enhance Competencies of Academic Librarians

S/ N	Strategies	FUTO \bar{X}	MOUAU \bar{X}	UNN \bar{X}	UNIZIK \bar{X}	Average Mean \bar{X}	Accepted or Not Accepted
1	Librarians should be flexible and eager for new experiences and knowledge	3.75	3.40	3.76	4.00	3.73	A
2	There is need for internship for library and information science graduates	3.50	3.40	3.59	4.00	3.62	A
3	Librarians should hone their creativity in accordance with the requirements in the labour market	3.50	3.20	3.47	4.00	3.54	A
4	Library and information science schools should establish new and contemporary current curricula	3.75	3.40	3.88	4.00	3.76	A

	that meet demands of the labour market						
5	Library and information science educators should help students obtain core competencies by instilling self confidence in them to acquire skills which were not taught in library schools	3.75	3.40	3.76	3.75	3.67	A
6	Library and information science schools programmes must find appropriate balance between training, education and practical skills.	3.75	3.60	3.59	4.00	3.74	A

Table 4 shows that respondents agreed with all the listed strategies which **were** meant to enhance competencies of professional librarians. This fact emphasizes the need they felt for self development, professional growth and realization of their full potentials through continuous updating of their knowledge and skills. Findings of this study agree with those of Ferreira et al. (2007)'s study.

5.0 Conclusion

The needs of professional librarians are two-fold. The first one is the need to emphasize acquisition and updating of knowledge.-based competencies. The other requires further development of skills'-based competencies.

Professional librarians acquired knowledge competencies which related mostly to traditional librarianship from their library schools. This factor manifested in the extent of application of these competencies in the discharge of their duties. There is therefore positive correlation between extent of acquired knowledge-based competencies from library schools and the extent of application of such competencies to their duties. There is no correlation between extent of acquired skills-based competencies from library schools and the extent of application of such competencies to their duties.

It is expected that graduates of library schools should have gained enough competencies to enable them perform creditably in their various institutions and as required by the labour market. From the study, they have not acquired core ICT – based competencies. Hence there is a gap between competencies acquired by library professionals from the library schools and the demands of the labour market. Consequently, these challenges encountered by library professionals with respect to competencies could be attributed to non-currency of the library schools' curricula.

From the challenges encountered by professional librarians and strategies geared toward enhancing their competencies, it is concluded that library professionals in S. E. Nigeria are yet to become information and communication technologically savvy.

Recommendations

In the light of the conclusions, the following recommendations are made:

- (1) Library professionals need to be given thorough exposure through sponsorship to continuing education programmes, workshops and conferences.
- (2) They need to update their ICT knowledge-based and skills'-based competencies by becoming computer literate. The situation should be improved by taking advantage of internet access as well as internet facilities. To this end, there is need to engage ICT knowledgeable professional or librarian to mentor library professionals
- (3) The curricula of library schools address traditional librarianship courses mostly. In the 21st century where electronic/digital librarianship holds sway, revision of library schools' curricula to update course content in order to reflect prevailing situation is apt and prudent.
- (4) Library schools in S.E. Nigeria should consider working in partnership with employers and their organizations. The arrangement should be geared toward skills improvement of the school's products.
- (5) A similar study should be conducted for para-professionals to determine their need of core competencies

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