



**AWARENESS, PERCEPTION AND USE OF REFERENCE SERVICE 2.0 AMONG
UNDERGRADUATE STUDENTS IN AMBROSE ALLI UNIVERSITY LIBRARY SCHOOL,
EDO STATE-NIGERIA**

IGBINOVIA, MAGNUS OSAHON

*Department of Library, Archival and Information Studies,
University of Ibadan, Nigeria*

EWERE, IYOBOSA

ORAGBON, OFURE JOYCE

*John Harris Library,
University of Benin, Nigeria*

ABSTRACT

There is a dearth of empirical research on the tools for digital reference services among library undergraduate students who are the next generation of librarians and information professionals on whom the mantle of librarianship will eventually rest. The study was therefore designed to investigate the awareness, perception and use of reference service 2.0 (RS 2.0) among undergraduate students in Ambrose Alli University, Edo State, Nigeria. The survey research design was employed for the study with a population of 587 across all levels in the 2014/2015 academic session and Yamane (1967) formula was used to arrive at 238 students as the sampling size. The closed-ended questionnaire validated and pretested to give a reliability coefficient of 0.81 Cronbach alpha was used to elicit data, and out of the 238 copies of the questionnaire distributed, 238 was returned, found usable and analysed consisting 100% response rate. The findings of the study revealed that the awareness of RS 2.0 by the respondents was slightly low. RS 2.0 was perceived to be easy and quick to use as well as enhance learning abilities. The level of RS 2.0 accessibility was high whereas the use for RS 2.0 was found to be low with independent study/research as the main purpose of use. The obstacles encountered by undergraduate library student in the use of RS 2.0 were high cost to acquire and maintain RS 2.0 tools, poor internet connectivity and expensive cost of software. It was recommended that library school curriculum should include a course on reference service as a platform to create awareness on RS 2.0. Moreover, library schools through their departmental libraries or laboratories should give their students access to RS 2.0 tools as well as good internet connectivity either freely or at a subsidized rate.

Keywords: *Library school students; Digital reference service; Reference service 2.0; Undergraduates, Nigeria*

Introduction

Library, as a dynamic information institution in the 21st century has undergone several changes as human civilization makes necessary and has continuously improved its services in the face of changing technologies. The present information age is characterised by high influx of information and communication technologies (Igbinovia, Solanke & Ogbole, 2016) which has given individuals access to myriad of information through the networks. This however, poses a threat to the existence and continuous relevance of the library as an institution charged with the primary responsibility of meeting the information needs of its stakeholders. In a bid to maintain relevance, libraries have embraced the concept of blended librarianship, which according to Shrank and Bell (2011), accepts that the digital computer revolution has changed the paradigm by which society produces and consumes information. This acceptance has introduced the concept of disruptive innovation (the technology that changes the value proposition of a state). The significance of blended librarianship in

relation to disruptive innovations is reflected in the endless research studies on fertile areas of technological application to librarianship and associated trends, including reference service 2.0 tools.

According to Tajer (2009), Reference service 2.0 (RS 2.0) is a proposal model using web 2.0 tools for an effective reference service in 2.0 libraries. Thus, reference service 2.0 (RS 2.0) is a model based on the principles of Web 2.0 such that entails the adoption of Library 2.0 tools for effective reference service delivery. It is one of the novel areas in library practices and as such requires scholarly attention. However, for the purpose of this study RS 2.0 will be considered as the applications, tools or technological packages that are used for reference services in a digital environment generally and in a 2.0 world specifically.

Several empirical studies have been done on awareness, perception and use of Web 2.0 among undergraduate students, and few on Library 2.0. However, there seem to be none on RS 2.0 among undergraduate students in general or library school students in particular. Library schools students are the future of librarianship and as such require professional and scholarly attention; hence this study investigates the awareness, perception and use of reference service 2.0 among undergraduate students in Ambrose Alli University library school in Edo State, Nigeria.

Statement of the Problem

Although digital reference services (DRS) are becoming more popular among the digital natives and migrants coupled with its current place of pride in novel literature on reference services, Luo (2008) opined that not many studies have been conducted to examine the users' awareness and preferences in digital reference services and the technologies in rendering these services. From preview of literature, there seem to be lack of empirical research on the tools for ensuring RS 2.0 in view of its awareness, perception and use among library undergraduate students who are the next generation of librarians and information professionals on whom the mantle of librarianship will eventually rest. The implication of this is that the next generation of librarians might encounter difficulties in using technologies to render reference services to library clientele negating the library's primary purpose of meeting the information needs of users. It therefore follows that there is a gap in the current state of knowledge on the awareness, perception and use of Reference service 2.0 among library school students; hence this study. In line with this, the following research questions were raised:

1. What is the level of library school students' awareness of Reference service 2.0 applications in Ambrose Alli University, Edo State, Nigeria?
2. What is the perception of Reference service 2.0 applications among library school students in Ambrose Alli University, Edo State, Nigeria?
3. What is the level of access of Reference service 2.0 tools to the library school students in Ambrose Alli University, Edo State, Nigeria?
4. What is the level of use of Reference service 2.0 among the library school students in Ambrose Alli University, Edo State, Nigeria?
5. What are the challenges associated to the use of Reference service 2.0 as perceived by the library school students in Ambrose Alli University, Edo State, Nigeria?

Review of Related Literature

A major disruptive or technological innovation that has permeated the library and its operations is the Web 2.0. Thanuskodi (2011) opined that the Internet and web technology have changed the way people interact, communicate, share and acquire knowledge. However, with the evolution of the Internet and communication technology, Web 2.0 has evolved into a dynamic, interactive and collaborative platform that facilitates exchange of knowledge and information among its users. Barsky in Alajmi (2011) defined Web 2.0 as social phenomenon of user's experience of the web that is characterized by 'open communication, decentralization of authority, and freedom to share and reuse content 4p'. The application of Web 2.0 in the library brought about the concept of library 2.0. The concept of Academic Library 2.0, suggested by Habib in Alajmi (2011), was presented to describe how Web 2.0 tools could be used by academic information agencies for various purposes. For example, data could be collected on resources consulted and students' comments on



them via online public access catalogues (OPACs) with Web 2.0 attributes as courses are repeated. Thus, Library 2.0 is an extension of Web 2.0 into library practices that is the use of Web 2.0 applications/tools in rendering library services, including the reference service, which has gone digital.

The DRS also known as electronic reference service or online reference service, which simply imply a digital, electronic or online personal assistance rendered to an individual in need of a sort of information necessary to meet a perceived need that exist in his conscious mind. Berube in Singh (2004) opined that digital reference is a network of expertise, intermediation and resources placed at the disposal of someone seeking answers in an online environment. The digital reference service, among others, has improved on the limitations of traditional reference services; as such many benefits are accrued to it. Eke & Ekwelem (2014) opined that the emergence of DRS has affected the ways users seek information and think about reference service. Reference service 2.0 will play a very important role in adding more sophisticated ICTs with the properties of creating information on the one hand and facilitating sharing, interaction and collaboration on the other hand (Burhanna, Seeholzer & Salem, 2009).

However, for these Reference 2.0 applications to be fully utilized by undergraduate library school students, there must be a level of awareness and right mental disposition or perception towards these applications as it affects their learning as well as in its social context. Thanuskodi (2011) conducted a study on Web 2.0 awareness among library and information science professionals of the Engineering Colleges, concluding from the study that library and information science (LIS) professionals are well aware of the modern concepts like Web 2.0. Contrarily, Al-Daihani (2009a) on the study of the knowledge of Web 2.0 by LIS academics found out that they have a low level of awareness of Web 2.0 applications.

Alajmi (2011) in the study of modeling student perception of web 2.0 technologies adoption in Kuwait found that for the academic students at School of Basic Education, the top two Web 2.0 technologies of which students were aware were YouTube and Microsoft Network (MSN) messenger of which they rated their awareness of these applications as competent. However, from the study, the general or holistic awareness of Web 2.0 was rated as “Novice” hereby concluding that this awareness level affects the adoption of these applications and when students increase their awareness of Web 2.0 applications, they are more likely to use them as learning tools.

The awareness of these technological applications will result in the attitudes and perceptions, which ultimately translate into the use of the applications as learning tools. Al-Daihani (2009b) explored the academic librarian’s perception of using Library 2.0 in Kuwait. The highest agreement on barrier was lack of training on how to use Library 2.0 applications. Thus, Kennedy, Gary, Judd, Waycott & Bennett (2007) and Thanuskodi (2011) report that students are not yet ready to be named as Net generation or as digital natives

Methodology

The survey research was adopted to elicit data in a bid to determine the awareness, perception and use of RS2.0 applications by undergraduate library school students of Ambrose Alli University who constitute the population of this Study. Thus, the population of the study was 587 students across 100 to 400 levels in the 2014/2015 academic session. To arrive at the sample size given the target population of 587, the formula of Yamane (1967) as used by Puszczak, Fronczyk, and Urbański (2013) in determining sampling size was adopted. A 95% confidence level and precision $\pm 5\%$ = are assumed for the equation; where $e = .05$. The equation is presented thus:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = sample size

N = population size

e = acceptable sampling error

Thus:

$$n = \frac{587}{1+587(.05)^2} = 238 \text{ library students}$$

The sample size for this study was therefore 238 constituting approximately 41% response rate in relation to the population size. Structured questionnaire was designed and used to elicit data on all the research questions raised for the study. The questionnaire was subjected to both face validity and content validity to ascertain the logical arrangement of the items, semantics, mechanical accuracy, clarity and proper interpretations. Thirty (30) copies of the final draft was subjected to pilot study at University of Ibadan library school to test for reliability (consistency of measurement) analysis using statistical packages for social sciences (SPSS), which resulted to a Cronbach alpha of 0.81.

Presentation of Results

Six research questions were raised for the study and the results are hereby presented.

Table 1: Level the Students' Awareness of Reference Service 2.0 Applications

S/N	Reference services 2.0	NA	FA	MA	VMA	Mean	Std.
1	Reference and instant message	67	80	41	50	2.31	1.097
		28.2%	33.6%	17.2%	21.0%		
2	Blog	98	39	48	53	2.24	1.206
		41.2%	16.4%	20.2%	22.3%		
3	Digital Reference Robots	44	33	24	137	3.07	1.206
		18.5%	13.9%	10.1%	57.6%		
4	E-mail (as a reference service tool)	31	38	37	132	3.13	1.106
		13.0%	16.0%	15.5%	55.5%		
5	Facebook (age and group)	38	80	23	97	2.75	1.152
		16.0%	33.6%	9.7%	40.8%		
6	Frequently asked question FAQ	29	23	43	143	3.26	1.059
		12.2%	9.7%	18.1%	60.1%		
7	Google+ (as a reference service tool)	107	24	30	77	2.32	1.331
		45.0%	10.1%	12.6%	32.4%		
8	Really simple syndicate (RSS)	120	35	44	39	2.01	1.162
		50.4%	14.7%	18.5%	16.4%		
9	Twitter (as a reference service tool)	66	29	33	110	2.79	1.286
		27.7%	12.2%	13.9%	46.2%		
10	Pinterest (as a reference service tool)	141	24	22	51	1.93	1.242
		59.2%	10.1%	9.2%	21.4%		
11	Voice over Internet Protocol (VoIP)	149	15	41	33	1.82	1.152
		62.6%	6.3%	17.2%	13.9%		
12	Web forms (on library websites)	69	108	32	29	2.09	.953
		29.0%	45.4%	13.4%	12.2%		
13	Wikis	159	9	19	51	1.84	1.259
		66.8%	3.8%	8.0%	21.4%		
N = 238; Grand Mean = 31.56; Criterion Mean = 2.50							

Very Much Aware (VMA), Moderately Aware (MA), Fairly Aware (FA), and Never Aware (NA)

In order to establish the level of awareness of RS 2.0 among the respondents, a test of criterion was conducted and the weighted mean = 2.42 which is below the criterion mean of 2.50 which implies a low level of awareness. Therefore the aggregate level of awareness of reference service 2.0 by the study's respondent is low.

Table 2: Perception of Reference Service 2.0 Applications

S/N	Perceptions	SD	D	A	SA	Mean	Std.
-----	-------------	----	---	---	----	------	------

1	They are easy and quick to use	16	14	65	143	3.41	.875
		6.7%	5.9%	27.3%	60.1%		
2	They are more effective than traditional reference service style	17	71	42	108	3.01	1.021
		7.1%	29.8%	17.6%	45.4%		
3	They are more convenient than coming to the library for assistance	22	40	130	46	2.84	.842
		9.2%	16.8%	54.6%	19.3%		
4	They enhance learning abilities	27	10	66	135	3.30	.989
		11.3%	4.2%	27.7%	56.7%		
5	Knowledge of reference service 2.0 and its relevant skills are required for students in library schools	17	35	116	70	3.00	.854
		7.1%	14.7%	48.7%	29.4%		
6	Reference service 2.0 instructions should be introduced into library schools curricula	32	23	94	89	3.01	1.006
		13.4%	9.7%	39.5%	37.4%		
N = 238; Criterion Mean = 2.50							

Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD)

Table 2 shows that most of the respondents perceived that: RS 2.0 tools are easy and quick to use (mean = 3.41; std. = .875), enhance learning abilities (mean = 3.30; std. = .989), and more effective than traditional reference service style (mean = 3.01; std. = 1.021). The least of the responses indicated that RS 2.0 was better than coming to the library for assistance (mean = 2.84; std. = .842).

Table 3: Level of Access of Reference Service 2.0 Tools to Library School Students

S/N	Accessibility	NA	FA	MA	HA	Mean	Std.
1	Personal computer (desktop or laptop)	37	50	95	56	2.71	.995
		15.5%	21.0%	39.9%	23.5%		
2	Smart mobile devices (android, blackberry, windows, and tablet)	21	30	34	153	3.34	1.005
		8.8%	12.6%	14.3%	64.3%		
3	Internet	33	10	33	162	3.36	1.073
		13.9%	4.2%	13.9%	68.1%		
N = 238; Criterion Mean = 2.50							

Highly Accessible (HA), Moderately Accessible (MA), Fairly Accessible (FA), and Never Accessible (NA)

Most of the respondents indicated that Internet was highly accessible (mean = 3.36; std. = 1.073). This is followed closely by smart mobile devices (mean = 3.34; std. = 1.005) while, personal computers were moderately accessible (mean = 2.71; std. = .995). In order to establish the level of accessibility of RS 2.0 among respondents, a test of criterion was conducted and the weighted mean = 3.13 which is above the criterion mean of 2.50. Therefore the aggregate level of access to RS 2.0 by the respondents was found to be high.

Table 4: Level of Use of Reference Service 2.0

S/N	Usage	NU	RU	OU	AU	Mean	Std.
1	Ask a librarian tool (chat reference and instant messages)	55	73	54	56	2.47	1.089
		23.1%	30.7%	22.7%	23.5%		
		47.5%	15.5%	18.5%	18.5%		
2	Blogs	135	29	18	56	1.98	1.261
		56.7%	12.2%	7.6%	23.5%		
3	Digital Reference Robots	38	43	33	124	3.02	1.160
		16.0%	18.1%	13.9%	52.1%		
4	E-mail (as a reference service tool)	48	21	28	141	3.10	1.218
		20.2%	8.8%	11.8%	59.2%		

5	Facebook (page and groups)	66	88	34	50	2.29	1.088
		27.7%	37.0%	14.3%	21.0%		
6	Frequently asked question (FAQ)	72	23	29	114	2.78	1.320
		30.3%	9.7%	12.2%	47.9%		
7	Google+ (as a reference service tool)	60	95	17	66	2.37	1.139
		25.2%	39.9%	7.1%	27.7%		
8	Really simple syndicate (RSS)	51	56	12	119	2.84	1.254
		21.4%	23.5%	5.0%	50.0%		
9	Twitter (as a reference service tool)	112	47	23	56	2.10	1.227
		47.1%	19.7%	9.7%	23.5%		
10	Pinterest (as a reference service tool)	135	34	22	47	1.92	1.204
		56.7%	14.3%	9.2%	19.7%		
11	Voice over Internet Protocol (VoIP)	134	42	31	31	1.83	1.091
		56.3%	17.6%	13.0%	13.0%		
12	Web forms (on library website)	137	29	36	36	1.88	1.150
		57.6%	12.2%	15.1%	15.1%		
13	Wikis	143	36	21	38	1.81	1.138
		60.1%	15.1%	8.8%	16.0%		
N = 238; Criterion Mean = 2.50							

Always Used (AU), Often Used (OU), Rarely Used (RU), and Never Used (NU)

Most of the respondents indicated that they always use E-mail (mean = 3.10; std. = 1.218), and digital reference robots (mean = 3.02; std. = 1.160), just as many others also indicated that they never used wikis (mean = 1.81; std. = 1.138), and Voice over Internet Protocol (mean = 1.83; std. = 1.091). In order to ascertain the level of use, a test of criterion was conducted and the weighted mean = 2.33 which is below the criterion mean of 2.50 which implies a low level of use. Therefore the aggregate level of use of RS 2.0 by the respondents was low.

Table 7: Purpose of Use of RS 2.0

S/N	Purpose	NU	RU	OU	AU	Mean	Std.
1	Assignment and homework	38	18	32	150	3.24	1.138
		16.0%	7.6%	13.4%	63.0%		
2	Personal studies for examination	28	98	79	33	2.49	.875
		11.8%	41.2%	33.2%	13.9%		
3	Independent study/research	33	26	66	113	3.09	1.066
		13.9%	10.9%	27.7%	47.5%		
4	Leisure	37	39	63	99	2.94	1.097
		15.5%	16.4%	26.5%	41.6%		
N = 238; Criterion Mean = 2.50							

Always Used (AU), Often Used (OU), Rarely Used (RU), and Never Used (NU)

Most of the respondents indicated that they used RS 2.0 for independent study/ research (mean = 3.09; std. = 1.066) while, very few used it for personal studies for examination (mean = 2.49; std. = .875).

Table 8: Challenges associated with the Use of Reference Service 2.0

S/N	Challenges	SD	D	A	SA	Mean	Std.
1	Relevant devices that foster use are expensive to acquire and maintain	36	19	48	135	3.18	1.106
		15.1%	8.0%	20.2%	56.7%		
2	Subscription to reference service 2.0 tools is expensive	21	42	57	118	3.14	1.005
		8.8%	17.6%	23.9%	49.6%		
3	Internet connectivity affected by	27	33	53	125	3.16	1.047



	poor network connection	11.3%	13.9%	22.3%	52.5%		
4	Reference service 2.0 tools are not used in my university library	26	126	57	29	2.37	.836
		10.9%	52.9%	23.9%	12.2%		
5	Reference service 2.0 tools are not used in many Nigerian libraries I have visited	26	111	38	63	2.58	.998
		10.9%	46.6%	16.0%	26.5%		
6	I do not have adequate technologies skills needed to use reference service 2.0 tools efficiently	22	110	48	58	2.60	.957
		9.2%	46.2%	20.2%	24.4%		
7	Publicity given to reference service 2.0 tools are not user friendly	33	131	28	46	2.37	.948
		13.9%	55.0%	11.8%	19.3%		
8	Technical support for efficient use of reference service 2.0 is not encouraging	68	68	45	57	2.38	1.137
		28.6%	28.6%	18.9%	23.9%		
N = 238; Criterion Mean = 2.50							

Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD)

Most of the respondents in Table 8 indicated that relevant devices that foster use are expensive to acquire and maintain (mean = 3.18; std. = 1.106), Internet connectivity were affected by poor network connection (mean = 3.16; std. = 1.047), and subscription to RS 2.0 tools is expensive (mean = 3.14; std. = 1.005). However, most of the respondents dissented that they had problem of publicity given to RS 2.0 tools which are not user friendly (mean = 2.37; std. = .948); RS 2.0 tools are not used in my university library (mean = 2.37; std. = 836), and technical support for efficient use of RS 2.0 is not encouraging (mean = 2.38; std. = 1.137).

Discussion of the Findings

The result of the study showed that the awareness of RS 2.0 among undergraduate students of Ambrose Alli University library school was low. Though most of them were aware of FAQ and E-mail as tools for DRS, the overall awareness of RS 2.0 was low, which corroborates Naylor, Stoffel, & Van Der Laan (2008) when they ascertained why chat reference service was not being utilized by students. Using a series of in-depth focus group discussions, they found out that none of the students in their focus group was aware of the chat reference service. The finding, however, is in contrast with that of Ramos & Abrigo (2011) where majority of their respondents (189 out of 239) were found to be aware of the availability of DRS in the libraries. Though it is expected that an awareness of DRS should depict an awareness of RS 2.0, there are tendencies that students could be aware of DRS and not be aware of the tools used for such services (RS 2.0).

Also, the result showed that RS 2.0 was easy and quick to use as well as enhance learning abilities. This corroborates Techataweewan (n.d) who opined that Web 2.0 (the model for RS 2.0) is a power tool that is easy to use and consumes less money. Moreover, the findings of the study showed that RS 2.0 enhance learning abilities, which is in line with that of Luo (2010) which posited that Web 2.0 tools have had an overall positive impact on teaching and learning. From the finding the least responses indicated that RS 2.0 are better than coming to the library for assistance which seem to support Granfield & Robertson (2008) whose study suggested that the reference desk continues to be the most popular method of getting help in the library, but virtual reference satisfies a niche for users who prefer to work outside the library.

On the level of accessibility, the study showed that the aggregate level of access to reference service 2.0 by the study's respondent is high. This was influenced by the accessibility of internet facilities and smart mobile devices. This could be as a result of the influx of information and communication technologies (Igbinoia & Solanke, 2015) which has given today's undergraduate unrestricted access to a myriad of information (Igbinoia & Solanke 2016). Moreover, the study showed that the level of use of RS 2.0 by the undergraduates was low as they indicated that they used it for independent study/ research. The purpose of use could influence the level of use as the study



surveyed undergraduate students whose independent study is not very rigorous compared to those in postgraduate studies. This could be why Granfield & Robertson (2008) asserted that virtual reference services may have a special appeal to graduate students since they seem more likely to conduct their research outside the library. Lastly, to ascertain possible problems associated with use of RS 2.0, the study showed that relevant devices that foster use are expensive to acquire and maintain, Internet connectivity were affected by poor network connection and subscription to reference service 2.0 tools is expensive for those tools that requires software to function.

Conclusion and Recommendations

Library school curriculum though makes provision for the teaching of reference services, has not yet amplified the concept of RS 2.0 which encompasses tools for rendering reference services in a virtual environment. This has impeded the level of awareness of RS 2.0 by undergraduate library school students. However, it seems that most of some of these students use RS 2.0 tools like VoIP, wikis, web forms, twitter, pinterest, facebook among others for personal purposes other than reference services delivery, and are unaware that these tools constitute RS 2.0. These tools are more preferred than the traditional reference service style in terms of effectiveness and efficiency. These tools can be easily learnt and adopted by library school students in building library professionalism in the 21st century as undergraduate students are more than ever accepting technologies and becoming digital natives. In light of the findings and conclusion drawn, it is recommended that:

- i. Library school curriculum makes provision for teaching reference services as a course which should be used as a platform to create awareness on RS 2.0 tools to undergraduate library school students as suggested by their low level of awareness of RS 2.0.
- ii. Library school students should be given action-based (role-play) or practical assignments where they are made to render digital reference services using RS 2.0 to an assumed information user in a bid to equip them with practical knowledge on the use of RS 2.0 tools as necessitated by their low level of use of RS 2.0.
- iii. Library schools through their departmental libraries or laboratories should give their students access to RS 2.0 tools as well as good internet connectivity either freely or at a subsidized rate in line with the study's finding on key challenges associated with the use of RS 2.0.

REFERENCES

- Al-Daihani, S. (2009a). The knowledge of Web 2.0 by library and information science academics. *Education for Information*, 27(1), 39-55.
- Al-Daihani, S. (2009b). Perceptions of academic librarians in Kuwait of library 2.0. *Digest of Middle East Studies*, 18(2), 27-39.
- Alajmi, M.E. (2011). Modelling student perception of web 2.0 technologies adoption in Kuwait, dissertation prepared for the degree of doctor of philosophy. University of North Texas
- Burhanna, K. J., J. Seeholzer, and J. J. Salem. 2009. No Natives Here: A Focus Group Study of Student Perceptions of Web 2.0 and the Academic Library. *The Journal of Academic Librarianship*, 35 (6):523-532
- Eke, H.N & Ekwelem, V.O. (2014). Exploratory study of online reference services of libraries in Nigeria. *Library Philosophy and Practice (e-journal)*, Paper 1193. Retrieved from: <http://digitalcommons.unl.edu/libphilprac/1193>
- Granfield, D., & Robertson, M. (2008). Preference for reference: New options and choices for academic library users. *Reference & User Services Quarterly*, 48(1), 44-53.
- Igbinovia, M. O. & Solanke, O. E. (2015). Shinning a light on the reference Librarian Role as Reference Services Adapt to User's Needs. Elsevier Library Connect June 8, 2015. Available at <http://libraryconnect.elsevier.com/articles/shining-light-reference-librarian-role-reference-services-adapt-users-needs>
- Igbinovia, M. O. & Solanke, O. E. (2016). Measuring autonomy, competence and relatedness of users



- needs' satisfaction on use of reference sources and services by undergraduates. *Information Impact: Journal of Information and Knowledge Management*, 7(1), 149-162. Available at: <http://informationimpact.org/articles/20160707pg149-162-pdf/>
- Igbinovia, M.O., Solanke, O.E. & Ogbale, J.O. (2016). Inducing Illumination in Dark Places: The Relevance of Reference Librarian in the Information Age. *International Trends in Library and Information Technology*, 3(3), 2-12
- Kennedy, G., Dolgarno, B., Gary, K., Judd, T., Waycott, J. & Bennett, S. (2007). *The net generation are not big users of Web 2.0 technologies: Preliminary findings*. Retrieved September 20, 2010, retrieved from <http://www.ascilite.org.au/conferences/singapore07/procs/kennedy.pdf>
- Luo, L. (2008). Chat reference evaluation: a framework of perspectives and measures. *Reference Services Review*, 36(1), 71-85.
- Luo, L. (2010). Web 2.0 integration in information literacy instruction: An overview. *The Journal of Academic Librarianship*, 36(1), 32-40
- Naylor, S., Stoffel, B., & Van Der Laan, S. (2008). Why isn't our chat reference used more? Finding of focus group discussions with undergraduate students. *Reference & User Services Quarterly*, 47(4), 342-54.
- Puszczak, K., Fronczyk, A., & Urbański, M. (2013). Analysis of sample size in consumer surveys. Task force on quality of BCS data. Retrieved Dec. 12, 2015, from <http://www.oecd.org/>
- Ramos, M.S. & Abrigo, C. M. (2011). Reference 2.0 in action: An evaluation of the digital reference services in selected Philippine academic libraries. IFLA 2011 conference at Puerto Rico held 13-18 August, San Juan Available at <http://conference.ifla.org/ifla77>
- Singh, D. (2004). Reference services in the digital age. *Paper presented at the Conference on Library Management in the 21st Century* at the Ateneo de Manila University, Philippines, 29-30. March 2004. Retrieved April 1, 2011, from <http://rizal.lib.admu.edu.ph/rlconflibmgt/PDF/singh.pdf>
- Shrank, J. D. & Bell, S. (2011). Blended librarianship [re]envisioning the role of librarian as educator in the digital information age. *Reference & User Services Quarterly*, 51(5).
- Tajer, P. (2007). Reference Services 2.0: A Proposal Model for Reference Services in Library 2.0. 7th International CALIBER-2009, Pondicherry University, Puducherry, February 25-27. 315-321
- Techataweewan, W. (n.d.). Perceptions and use of Web 2.0 of Thai academic librarians. Retrieved from http://rizal.lib.admu.edu.ph/2012conf/fullpaper/FINAL%20Full%20paper_Wawta.pdf
- Thanuskodi, S. (2001). Awareness of library 2.0 applications among library and information science professionals at Annamalai University, Indian. *International Journal of Library Science*. 1(5) 75-83 DOI: 10.5923/j.library.20120105.02
- Thanuskodi, S. (2011). Web 2.0 awareness among Library and Information Science Professionals of the Engineering Colleges in Chennai City: A Survey. *J Communication*, 1(2): 69-75.
- Yamane, T. (1967). *Statistics, an introductory analysis*, 2nd Ed., New York: Harper & Row.