



EFFECT OF CONTEXTUAL INFORMATION LITERACY PROGRAMME ON RURAL FARMERS AWARENESS, ACCESS AND UTILISATION OF CASSAVA FARMING INPUTS IN NIGERIA

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ABSTRACT

Noting the dearth of literature on manifestation of information literacy in rural milieus despite the increasing positive influence of the practice in several endeavours, this paper set out to assess the effect of contextualised information literacy programme on rural farmers' awareness, access to and utilisation of cassava farming inputs in Nigeria. Guided by two null hypotheses, the field experimental design was adopted, with two villages in Nigeria selected to serve as treatment and control groups on the basis of their homogeneity. The population of the study comprised of all the cassava farming households in both villages, with each cassava farming household considered as a respondent and represented by any member of the household capable of receiving and giving information. A structured interview schedule was used to collect data from the respondents in three batches – the baseline, the first round (first year), and the second round (second year) – using a house-to-house visitation method. The Pearson correlation coefficient test, at a significant level of 0.05, was conducted on the data for the test of the hypotheses. The tests showed that information literacy (in the treatment village) had a statistically significant positive effect on cassava farmers' awareness, access to and utilisation of cassava farming information and inputs. This was contrary to the effect created by the existing information communication systems in the control village, which statistically impacted only on farmers' awareness. Thus, unlike existing information communication channels that basically spur peoples' awareness to information, the practice of information literacy not only acquainted the rural cassava farmers of their information environment but enabled them to access and utilise farming-related information effectively and profitably. The paper recommends that librarians, especially in the public library sector, should practice the theories of information searching, content repacking and selective dissemination of information at the instance of rural farmers, using



comprehensible formats that take cognizance of rural dwellers' level of formal education and language of communication.

Keywords: Information literacy, Cassava farmers, Rural farmers, Rural people, Rural dwellers

Introduction

In Nigeria where cassava is a staple crop and many rural farmers are into cassava farming, access to and use of right information pertaining to cassava farming is a great necessity to the rural farmers. Consequently, communicating information to rural cassava farmers on cassava farming inputs, such as the health and economic reasons for preferring new cassava varieties, where and how to access improved cassava cuttings, the right method of planting improved cassava species, how to secure agricultural loans and access other available related inputs is imperative. This has become very crucial as the global market on cassava products look up to Nigeria the largest producer of cassava and, regrettably, the least exporters of cassava products despite the suitability of soil and climatic conditions of the country for cassava farming (Food & Agriculture Organisation Statistics [FAOSTAT], 2012). Such situation is worrisome and imposes the need to experimentally assess the effect that a contextualised information literacy programme might have on rural farmers' awareness, access to and utilisation of cassava farming inputs in Nigeria.

A contextual information literacy (IL) programme is one designed in consideration of local language, literacy level and social-cultural conditions. This conception stands upon the salient point that Hicks and Lloyd (2016) noted against the traditional concept of IL, and sustains the view that IL is also a context-based phenomenon that goes beyond textually-related skills to include several operationalised engagement with information (Bruce, 2011; Gunton, Bruce & Stoodley, 2012; Lloyd, 2010; Lloyd et al., 2013). With this, information literacy is suitably regarded in this paper as a state of knowing about the availability of needed information (implying awareness), where to seek for and access them (denoting access), and the right ways to put the information into use (entailing utilisation). While such manifestation depicts IL among rural cassava farmers, there is no doubt that the result of this kind of study would be of great value to the Nigerian librarianship that is currently challenged to redefine its public libraries' ethos in a way that will effectively engage rural dwellers with appropriate information now and in future (Uzuegbu, 2016; 2019).

Objectives of the Study

This study is designed to test the null hypotheses which state that:

- i. There is no significant relationship between information literacy programme and cassava farmers' awareness, access to, and utilisation of cassava farming inputs available in Nigeria.
- ii. There is no significant relationship between existing information communication systems and cassava farmers' awareness, access to, and utilisation of cassava farming inputs available in Nigeria.

Review of Related Literature

Cassava is a plant that grows in tropic regions, and its starchy tuber roots are used as food in tropical countries like Nigeria (<http://www.iita.org/cassava>). The importance of the cassava crop as food, and as homemade or industrially exportable raw material for production of several essential items such as confectionery, sweeteners, glues for plywood, textiles, paper, biodegradable products, monosodium glutamate, and drugs has been noted (Adesina, 2012). Cassava farming is very common in Nigeria, especially in the rural communities of twenty-two States which include: Kogi, Ogun, Anambra, Delta, Edo, Benue, Cross River, Imo, Oyo, Rivers, Abia and others (Asante-Pok, 2013). The cassava crop grows in all seasons, including in harmattan seasons, and has different varieties. The pro-vitamin A cassava is a new cassava variety in Nigeria, and is primarily recommended for its health benefits, early harvest, and high productivity (Adesina, 2011).

It has been tested and is presently being recommended for all cassava farmers, especially those in the rural areas because they constitute the bulk of farmers in Nigeria. So, while cassava farming is the activity of growing cassava crop, cassava farming inputs refer to the publicly available agricultural assistance that rural cassava farmers in Nigeria can leverage (Uzuegbu, 2017), drawing the need to assess how the rural farmers get aware of, access and utilise the cassava related farming inputs in Nigeria. But, with the report of earlier studies showing the poor level of rural cassava farmers' awareness, access to and utilisation of cassava farming inputs available in Nigeria (Chukwuemeka & Nzewi, 2011; Iwuchukwu & Igbokwe, 2012; Uzuegbu & Naga, 2016), amidst the accessibility of many communication channels in rural areas, the necessity to look out for other effective means of spurring awareness, access to and utilisation of cassava farming inputs becomes imperative and birthed this study's focus on IL.

IL research can be categorised into three, with two of it having just a thin difference. The first is on educational environment. This deals with the individualistic skills for academic learning process and is largely influenced by the foremost traditional definitions of IL. The second is on workplace environments, speaking of IL as people's experiences in the course of using information. This could be in relation to computer and technology skills required of employees to use information effectively in professionally organised workplaces. It could also refer to the interdependency of workers to use and engage with information, within ethics and rules of works, but outside the textual and technological settings (Lloyd, 2010). Here, skills for and engagement with information is observed from the social perspective and is therefore pluralistic. Most of the emerging concepts of IL have fittingly suited the workplace environment.

The third area of research in IL is on community environment and has no substantial difference with the second if viewed from the perspective of Lloyd's works, as well as from the understanding that a community is a group of people who share something in common and are situated together. But, it appears distinct when considered as non-traditional groups (Bruce et al. 2013), maybe as a group of non-professionals, a group of illiterate and semi-illiterate people, as peasants, and generally as people in various settings order than in professionally organised workplaces. Good examples of works that represent the distinction between workplace and community environments include the immigrants research of Lloyd, Kennan, Thompson and Qayyum (2013); the emergency services studies of (Lloyd, 2009); the church community studies of Gunton,

Bruce and Stoodley (2012); and other information literacy researches into unofficial and everyday life (Yates, Partridge, & Bruce, 2009).

Across these three areas of research on IL, the impact of information literacy in varying contexts has been published. While impact studies are veritable research procedures used to strengthen policies and decision making in varying spheres of life (Pope, Bond, Morrison-Saunders & Retief, 2013), the impact of IL practice on various works of life cutting across workplace milieus, social settings and community environments is extensively underscored (Bowles-Terry, 2012; Bury, 2011; Cullen, Clark, & Esson, 2011; Erich & Popescu, 2010; Lloyd et al., 2013; Soleymani, 2014; Williams, Cooper & Wavell, 2014). This explains why IL has been described as a socio-cultural phenomenon that thrive on interpersonal occurrence (Gunton et al., 2012), as well as a context-based experience (Lloyd, 2010) that can be taught and learnt from six distinct frames (Bruce et al., 2006).

However, despite this wide coverage of IL studies, the manifestation of IL in rural contexts is scarcely reported in the literature. Apart from an earlier study that showed how tailor-made IL enhanced rural dwellers' participation in sustainable development goals (Uzuegbu, 2019), there is no other experimental evidence to show the relational occurrence of IL among rural publics. As Partridge, Bruce and Tilley (2008) have noted the need for IL research in "community settings", arguing that community IL is a crucial vehicle for societal progress because of its focus on "real people doing real things in real life context", this research is pertinent. Therefore, contextualising IL in this study is permitted and sustains the capitulation that "context" is vital in every research on information literacy (Lloyd & Williamson, 2008). After all, researching upon new contexts is important in grasping the full scope of IL and expanding its horizons.

Methodology

The field experimental design was adopted to assess the effect of IL on rural farmers' awareness, access to and use cassava farming inputs and its associated information. To conduct the field experiment, two villages in Nigeria were selected on the basis of their homogeneity. One village (Umuala village) served as treatment village and the other (Umuokoroukwu village) as control village. A self-developed IL resource package (ILRP) on four cassava farming inputs was implemented to administer treatment to the treated village and observed for two farming seasons – two years. The control village did not receive treatment but was open to the prevailing information communication channels accessible to cassava farmers in both villages. Cassava farming households in both villages totalled 158, with all of them constituting the population of the study. A cassava farming household was regarded as a respondent, and was represented by any member of the household capable of receiving and giving information.

A duly pretested structured interview schedule was used as data collection tool. The responses were not coded into scales because the study tool (the interview schedule) allowed for face-to-face interaction, and thus, provided grounds for the researcher to directly draw non-scaled decisions on the awareness, access, and utilisation responses. Data was collected in three batches – the baseline, the first round (first year), and the second round (second year) data – through a house-to-house visitation method. Pearson correlation coefficient test, at a significant level of 0.05, was used to test the relationship between the hypotheses variables. The four farming inputs chosen for the study –

selected on the basis of their relevance to cassava farmers in the villages studied – are herein outlined, while the norms upon which IL was measured is distributed in Table 1.

Table 1: Delineation of Norms upon which the Effect of IL on Cassava Farming is Measured

The Cassava Farming Inputs	The Measurable Norms		
	Awareness	Access	Utilisation
Pro-vitamin A cassava variety	Knowing about the cuttings of this cassava variety, and knowing about its availability for access through specific offices	Seeking for and receiving the cassava cuttings through the right offices, and obtaining the necessary information on how to use it	Planting the cassava cuttings on the farm in accordance with the specifications guiding its right use
Government’s 50% subsidised fertilizers	Knowing about subsidised fertilizers and its availability for cassava farmers to access	Seeking for and fulfilling the necessary criteria through the right offices, and obtaining fertilizers	Applying the obtained fertilizer on the cassava farm
Special loan and facilities for rural farmers	Knowing about the special bank loan and facilities, and understanding that the loan has been mapped out for cassava farmers from rural areas to access	Seeking for and fulfilling the necessary criteria through the designated banks and institutions to obtain loan	Using the obtained loan to engage in any activity that is related to cassava farming, or to purchase any item used in the cassava farming process
Cassava post-harvest practices	Knowing about the several items or products that cassava harvest can be processed into aside from the traditional <i>Garri</i> and <i>Fufu</i> by-products, and knowing where to ask about the knowledge and whom to obtain it from	Having the complete procedural knowledge of how to produce one or more of the contemporary by-products of cassava harvest	Putting the acquired procedural knowledge into actual practise – producing any of the new derivatives of cassava harvest

The pro-vitamin A cassava variety

This input is also known as yellow cassava and presently has three varieties labelled: UMUCASS 36, UMUCASS 37, and UMUCASS 38. The pro-vitamin A cassava is the latest cassava variety in Nigeria. The Nigerian government has sponsored its propagation and distribution across cassava farmers in the country. Planting the stem cuttings assures early harvest, from six months, against ten to twelve months of maturity period taken for old varieties of cassava. Besides, the pro-vitamin A cassava variety is rich in vitamin A, plant-sourced beta-carotene, which makes it a cheap and easy antidote for blindness and other vitamin A deficiency disease among rural dwellers since cassava meals constitute over 90% of their daily food. In addition, the variety has in-built resistance to plant mosaic diseases, which affect the production of old varieties of cassava. Since 2012, the pro-vitamin A cassava stems or cuttings have been subsidised by the Nigerian government for the benefit of the rural cassava farmers. The subsidisation is 50%, if sourced from government’s agricultural units like the Agricultural Development Programme (ADP) Office, the National Root and Crop Research Institute (NRCRI), etc. The scientifically experimented farming practices associated with the pro-vitamin A

cassava variety include: cutting size, planting format, the seasons to plant, the right time to apply fertilizer, and the right time to weed the farm.

Government's 50% subsidised fertilizers

This input was launched by the Nigerian government in 2012 and is implemented through the Federal Ministry of Agriculture and Rural Development (FMARD). As a requirement for accessing the input, cassava farmers must be registered in the farmers' database of Nigeria maintained by the Federal Ministry of Agriculture and Rural Development (FMARD). The register is updated regularly. A farmer, not more than one to be registered in a household, gets two bags of fertilizer every farming season. Eligible farmers receive SMS alerts on their mobile phones containing redemption voucher code and address of a dealer shop in the nearest city to visit and redeem the fertilizer.

Special loan and facilities for rural farmers

The Nigerian government has made provisions for special loan and facilities for rural farmers in general. The financing agencies saddled with the task of disbursing loan to eligible farmers are: Bank of Agriculture (BOA) Limited, Nigeria; Microfinance Banks (MBs) in rural communities; and, The National Directorate of Employment (NDE). As criteria, accessing the loan by rural farmers is through farmers' cooperative societies. The minimum number of farmers for each cooperative society is twenty. Members must also operate individual farmer accounts with any branch of BOA nearest to them for a minimum of three months. Amounts accessible to rural farmers are determined in two ways: one, any amount which the farmer has up to 20% of it in his account, and two, any amount that is not more than two hundred and fifty thousand naira. Whereas the principal interest is 12%, charged up-front, the BOA staff usually visit farmers' farms and, in some cases, demand for guarantors before loan is approved. Loan must not be used for any other business other than farming and farming-related businesses.

Individual rural farmers can also get loan of any amount if they show equal value of landed property and two guarantors as indemnity. Whichever way, farmers pay back loan in instalments within a period that is equal to the months required to harvest the crop that the farmer will cultivate with the loan. With such loan, rural cassava farmers can purchase cassava stems or cuttings, fertilizers, hire labour, cultivate more cassava, buy cassava processing technology such as graters, water depressors, frying machine, and so on. In addition, government and non-governmental organisations regularly donate cassava processing items to various rural farmers, but usually do so through the farmers' cooperative societies. The items usually donated include cassava graters, water-depressors, frying machines, starch dryers, among others. Hence, forming cooperative societies among rural cassava farmers is an advantage to them.

Cassava post-harvest practices

The richness of the cassava crop is evident on its homemade added value products such as high-quality cassava flour, exportable cassava chips, cassava cake, cassava bread, cassava chin-chin and other crunchy-kind-of bakery products. Others include cloth starch, sweeteners and glues for plywood and several other items produced from cassava starch. The Nigerian government is promoting increased cassava cultivation vis-à-vis the emerging derivatives of cassava harvests which are contemporary



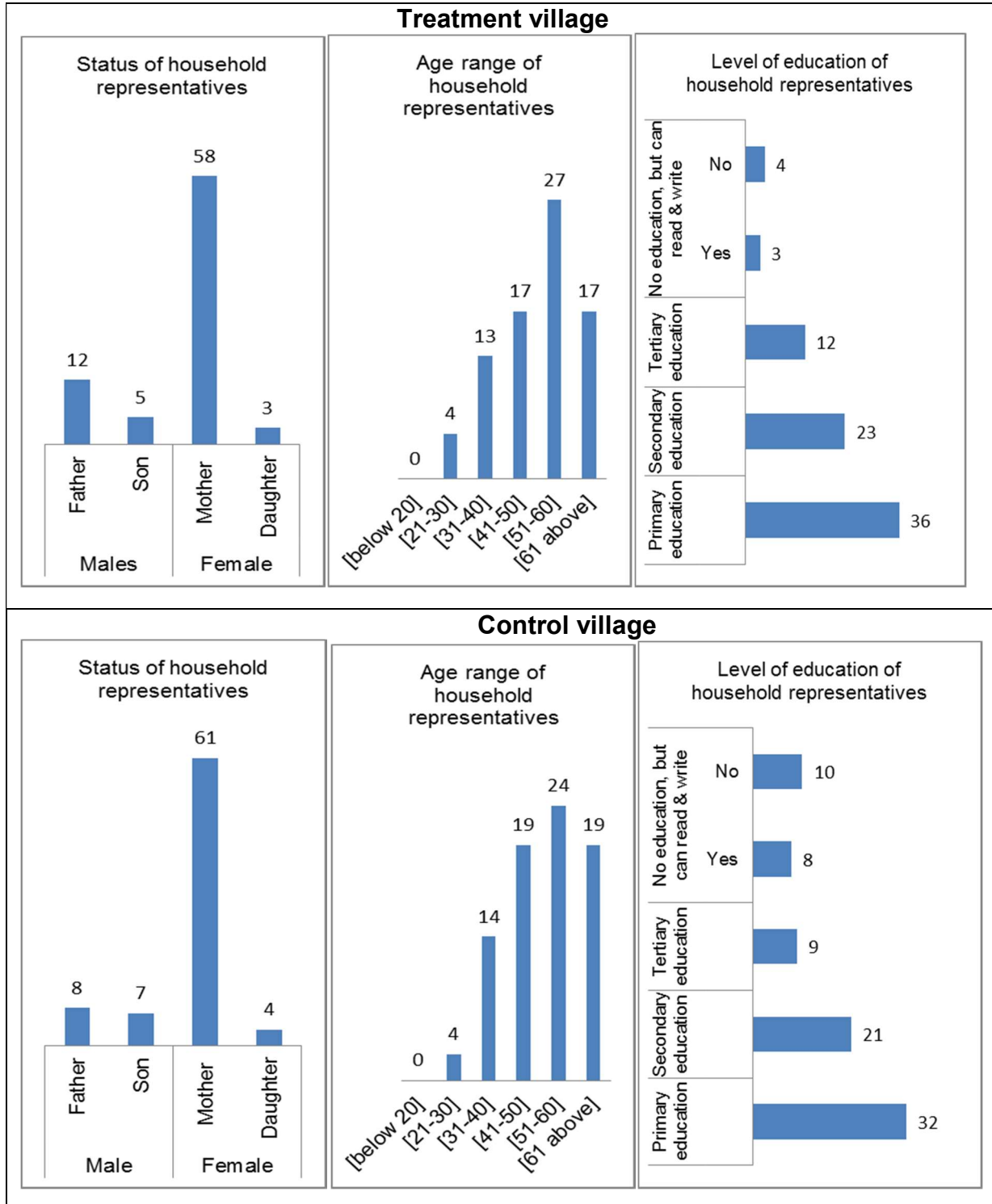
demands in both local and international markets. Hence, farmers' awareness of the various cassava derivatives, and the acquisition and application of relevant knowledge to produce various cassava derivatives is essential. Therefore, bringing rural cassava farmers to the knowledge of processing cassava harvest into relevant domestic, bakery and industrial products, other than the traditional *Fufu* and *Garri* derivatives, will be of advantage to the cassava farmers and consequently boost cassava farming among rural farmers in Nigeria.

Data Presentation and Analysis

The personal information of the cassava farmers studied is presented in Table 2. Recall that the cassava farming households studied appointed any member of their household capable of receiving and giving information to serve as respondents. Thus, the information presented in Table 2 is details of the household representatives that constituted the study respondents. It is found, both in the treated and in the control villages, that majority of the study respondents are Mothers who fall within the age bracket of 51 to 60 years. Basic primary education, usually undertaken between 6 to 12 years of age, is found prevalent as the highest level of formal education among the cassava farmers. As to those who did not attend formal education, all of them could identify figures, count and recognise money denominations, and express themselves very well in their local dialect. Only a few of them could read and write English words correctly.

It is further observed that even as appointing household representatives in this study was at the discretion of the households, that the households covered in this study appointed those who were the most involved in cassava farming activities to represent them. Comparatively, women involved more in cassava farming than other members of households. As obtained during interview, the men were usually absent from home because they engaged in entrepreneurial or part-time jobs and therefore render only supportive services to the women who do the actual farming. Likewise, the children were not very much involved in cassava farming. In some households, the children were school pupils. In other households with teenage and adult children, the boys were undertaking apprentice jobs in varying vocations, while the girls work in various private and public-owned goods and service firms in nearby cities.

Table 2: Distribution of Biographical Characteristics of the Respondents



Results of Hypotheses Testing

Hypothesis one: There is no significant relationship between IL and cassava farmers' awareness, access to and utilisation of cassava farming inputs available in Nigeria.

The test goes thus:

Table 3: Test of Relationship between IL and Cassava Farming

Information Literacy	Cassava Farming		
	Awareness	Access	Utilisation
Observations			
Baseline	60	24	13
First-round	284	80	77
Second-round	309	106	79

	Observations	t Stat	t Critical one-tail	P(T<=t) one-tail
Observations	1			
Awareness	0.908001522	-2.724264861	2.131846786	0.026377054
Access	0.978411618	-2.809853384	2.131846786	0.024162072
Utilisation	0.879036843	-2.505913592	2.131846786	0.03317306

r = the corresponding r² =
 Awareness: 0.91 0.82
 Access: 0.98 0.96
 Utilisation: 0.88 0.77

From the result of the first hypothesis test, it is observed that awareness, access and utilisation of cassava farming inputs have strong positive significant relationship with IL. Their *r* scores are closer to 1, and their *r*² indicates the goodness of fit of the relationship between IL and cassava farming (cassava farmers' awareness, access to, and utilisation of cassava farming inputs). The goodness of fit of the relationship is more pronounced on *access* and *awareness* respectively. Figure 1 shows the linear direction of the relationship. By this result therefore, the null hypothesis is rejected and thus, imply that there is a strong positive significant relationship between IL and rural cassava farmers' awareness, access to, and utilisation of cassava farming inputs available in Nigeria. The upward progressions of the bars from baseline through the first and second years of the study are evident.

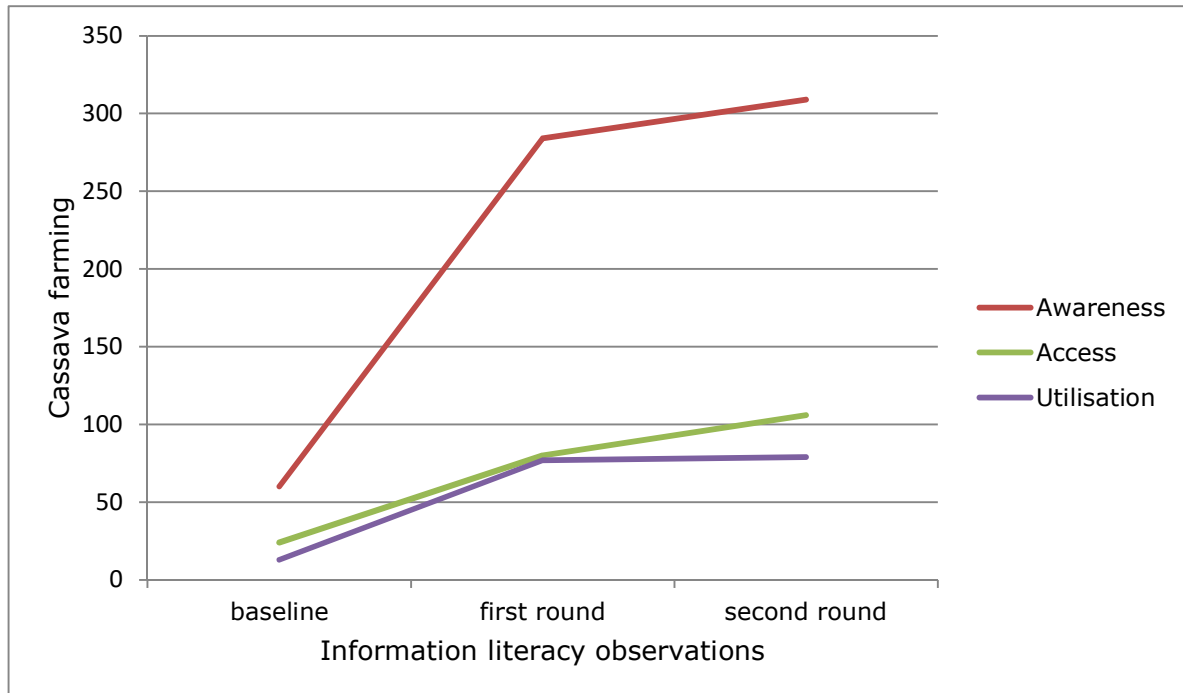


Figure 1: Linear relationship between IL and cassava farmers’ awareness, access to, and utilisation of cassava farming inputs.

Hypothesis two: There is no significant relationship between existing information communication systems and cassava farmers’ awareness, access to and utilisation of cassava farming inputs available in Nigeria.

The test goes thus:

Table 4: Relationship Test between Information Communication Systems and Cassava Farming

Existing Information Communication Systems	Cassava Farming			
	Observations	Awareness	Access	Utilisation
Baseline		65	24	12
First-round		80	15	3
Second-round		86	17	6

	Observations	t Stat	t Critical one-tail	P(T<=t) one-tail
Observations	1			
Awareness	0.970725343	-11.95861508	2.131846786	0.000140094
Access	-0.740612897	-5.976143047	2.131846786	0.001969814
Utilisation	-0.654653671	-1.846372365	2.131846786	0.069285418

r =	the corresponding r ² =
Awareness: 0.97	0.94
Access: -0.74	0.55

Utilisation: -0.65

0.43

From the result of the second hypothesis test, it is observed that only awareness of cassava farming inputs has a strong positive significant relationship with existing information communication systems. Access has a negative but significant relationship with existing information communication systems. But utilisation has an insignificant, negative and weak relationship with existing information communication systems. Figure 2 corroborates that the linear relationship between existing information communication systems and cassava farming is somewhat horizontal at access and utilisation (implying weak relationship), and, at the same time, somewhat skewed to negative linear. The result of this test implies that the existing information communication systems are not effective in impacting on cassava farmers' awareness, access and utilisation of farming inputs.

Consequently, the null hypothesis is rejected in terms of awareness, but accepted in terms of access and utilisation. This leaves a two-faced result for the second hypothesis test as thus: there is no (positive) significant relationship between existing information communication systems and cassava farmers' access and utilisation of cassava farming inputs available in Nigeria, even though existing information communication systems appeared to have a strong positive significant relationship with cassava farmers' awareness of cassava farming inputs available in Nigeria. Apparently, the downward direction of the bars in Figure 2 signifies the lack of impact between existing information communication systems and cassava farmers' access to and use of cassava farming inputs.

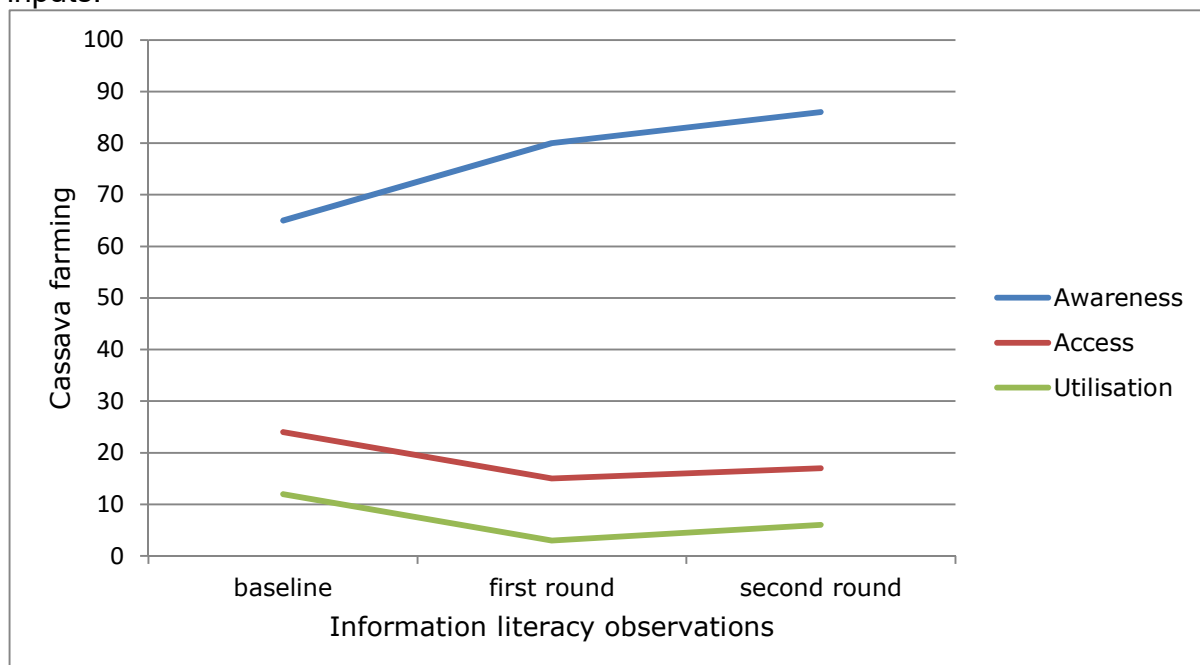


Figure 2: Linear relationship between existing information communication systems and cassava farmers' awareness, access to, and utilisation of cassava farming inputs

Succinctly, the results of the two hypotheses tests show that: i). there is a strong positive significant relationship between IL and rural cassava farmers' awareness, access



to and utilisation of cassava farming inputs available in Nigeria, and ii). there is no (positive) significant relationship between existing information communication systems and cassava farmers' access to and utilisation of cassava farming inputs available in Nigeria, even though a strong positive significant relationship exists between awareness of cassava farmers on cassava farming inputs and the existing information communication systems.

Discussion of the Findings

This study has supported the view that IL is an essential requirement for everyday life across diverse endeavours (Bruce, 2011; Gunton, Bruce & Stoodley, 2012; Lloyd, 2009; Lloyd, 2010; Lloyd et al., 2013). It is truly a social practice that is influenced by people, society, and their culture (Hicks & Lloyd, 2016). This means that what constitute IL depends on the people involved, the social order in which they live, and their ways of doing things, and is consistent with the social practice view on IL, where IL is said to be embedded and embodied on social activities that are underlined on effective and meaningful interaction among people in a social practice (Lloyd, 2010).

Secondly, unlike existing information communication channels that can only spur peoples' awareness to information, the practice of IL not only acquaints people of their information environment but enables effective access to information and proper utilisation of same in solving daily problems in diverse milieus. Notice that the rural cassava farmers in this study were largely uneducated and live in orally-communicating environments. And so, their demonstration of IL was situated on social navigational prowess, and not on technological and textual perspectives. Accordingly, the treated farmers, having learnt of what is available as well as how to access and utilise them profitably through a contextual IL administered to them by the researcher, moved into the society to successfully and progressively access and utilise cassava farming information across the four studied inputs for two years.

Yet, their control group counterparts who depended only on the prevailing means of information communication around them, without receiving treatment, did not improve beyond their baseline status on access and utilisation of cassava farming inputs. This revelation simply sustains the view that TV, radio, library, and other prevailing information communication media are truly not suitable for engaging rural people with development information and knowledge (Uzuegbu, 2016). So, as disseminating information to rural people through the conventional mass media does little or nothing beyond awareness creation, regular provision of context-based education to rural people, in small clusters and on relevant projects and associated information landscapes, puts them in better position to participate gainfully and play effective roles in the overall societal development. This is the crux of IL programmes in rural settings.

Conclusion

With an obvious concern to find out effective ways of enhancing rural farmers' engagement with relevant information, this study has adopted the field experiment method of research to show a significant relationship between IL and rural cassava farmers' awareness, access to, and utilisation of farming-related inputs and information. As can be seen in this study, the practice of IL is important to rural dwellers as much as it is to people in educational environments and professional workplaces. This draws a lot



of implications for the library institution, especially the public library system in Nigeria whose service domains cut across rural dwellers. Imperatively, the nitty-gritty of IL education among people living in rural areas requires librarians to regularly teach rural dwellers about useful information in the society and how to access and utilise such information profitably. Such service delivery is germane and necessary because someone knowing about information without understanding where and how to access and utilise it gainfully seems meaningless.

Recommendations

While further studies that focus on rural dwellers in developing countries is necessary to understand more about the IL application in rural contexts and to deepen the scope of information literacy education and practice, this study recommends that:

1. The library institution in Nigeria should start reaching out to rural populaces to guide them in accessing and utilising relevant information available in the society. After all, IL education has become a traditional role of librarians.
2. Librarians serving rural publics should henceforth conjecture and design their traditional practices of outreach service, information searching, content repacking and selective dissemination of information from a perspective that considers level of education and language of communication of the rural people.
3. The public library system in Nigeria should implement programmes that would regularly take public librarians to rural communities where they will engage in teaching rural dwellers how to navigate information landscapes across topical issues and participate meaningfully in them.

References

- Adesina, A. (2011). *Pro vitamin A cassava: A revolution for nutrition and health in Nigeria*. Speech delivered by, Dr. Akinwumi Adesina, the Honourable Minister of Agriculture and Rural Development, at the launch of the Pro-Vitamin A Cassava Varieties, held at the National Root Crops Research Institute, Umudike, Abia State, March 16, 2011.
- Adesina, A. (2012). Agricultural transformation agenda: Repositioning agriculture to drive Nigeria's economy. *Federal Ministry of Agriculture and Rural Development*. Retrieved from http://www.emrc.be/documents/document/20121205120841-agri2012-special_session-tony_bello-min_agric_nigeria.pdf
- Asante-Pok, A. (2013). *Analysis of incentives and disincentives for cassava in Nigeria: technical notes series*. Rome: MAFAP, FAO.
- Bowles-Terry, M. (2012). Library instruction and academic success: A mixed-methods assessment of a library instruction program. *Evidence Based Library and Information Practice*, 7 (1), 82-95. Retrieved from http://repository.uwyo.edu/cgi/view_content.cgi?article=1007&context=libraries_facpub
- Bruce, C. (2011). Information literacy programs and research: An international review.



The Australian Library Journal, 60 (4), 326-333.
Doi:10.1080/00049670.2011.10722652

- Bruce, C. S., Somerville, M. M., Stoodley, I. D., & Partridge, H. L. (2013). Diversifying information literacy research: An informed learning perspective. In Mark Hepworth and Geoff Walton (Eds.), *Developing people's information capabilities: Fostering information literacy in educational, workplace and community contexts*. (pp. 223-240). London: Emerald Group.
- Bruce, C., Edwards, S., & Lupton, M. (2006). Six frames for information literacy education: A conceptual framework for interpreting the relationships between theory and practice. *ITALICS - Innovations in Teaching and Learning in Information and Computer Sciences*, 5 (1), 1-18. Doi: 10.11120/ital.2006.05010002
- Bury, S. (2011). Faculty attitudes, perceptions and experiences of information literacy: A study across multiple disciplines at York University, Canada. *Journal of Information Literacy*, 5 (1), 45-64. Doi: <http://dx.doi.org/10.11645/5.1.1513>
- Chukwuemeka, E., & Nzewi, H. N. (2011). An empirical study of World Bank agricultural development programme in Nigeria. *American Journal of Social and Management Sciences*, 2 (1), 176-187. Doi:10.5251/ajsms.2011.2.1.176.187
- Cullen, R., Clark, M., & Esson, R. (2011). Evidence-based information-seeking skills of junior doctors entering the workforce: An evaluation of the impact of information literacy training during pre-clinical years. *Health Information and Libraries Journal*, 28 (2), 119-129. Doi: 10.1111/j.1471-1842.2011.00933.x
- Erich, A., & Popescu, C. (2010). The impact of information literacy in the academic education environment. *Studii de Biblioteconomie și Știința Informării /Library and Information Science Research*, 14. Retrieved from <http://www.lisr.ro/en14-erichpopescucr.pdf>
- FAOSTAT (2012). *Food and Agriculture Organization of the United Nations, Statistics Division*. Available at <http://faostat3.fao.org/browse>
- Gunton, L., Bruce, C. S., & Stoodley, I. (2012). Experiencing religious information literacy: Informed learning in church communities. *Australian Library Journal*, 61 (2), 119–132.
- Hicks, A. & Lloyd, A. (2016). It takes a community to build a framework: Information literacy within intercultural settings. *Journal of Information Science*, 42 (3), 334–343. Doi. 10.1177/0165551516630219



- Iwuchukwu, J. C., & Igbokwe, E.M. (2012). Lessons from agricultural policies and programmes in Nigeria. *Journal of Law, Policy and Globalization*, 5. Available at: <http://www.iiste.org/>
- Lloyd, A. (2009). Informing practice: Information experiences of ambulance officers in training and on-road practice. *Journal of Documentation*, 65 (3), 396-419.
- Lloyd, A. (2010). *Information literacy landscapes: Information literacy in education, workplace and everyday contexts*. Oxford: Chandos. Retrieved from <https://books.google.co.in/books?id=zEeANwAACAAJ>
- Lloyd, A., & [Williamson](#), K. (2008). Towards an understanding of information literacy in context: Implications for research. *Journal of Librarianship and Information Science*, 40 (1), 3-12. Doi: 10.1177/0961000607086616
- Lloyd, A., Kennan, M. A., Thompson, K. M., & Qayyum, A. (2013). Connecting with new information landscapes: Information literacy practices of refugees. *Journal of Documentation*, 69 (1), 121 – 144. Retrieved from <http://dx.doi.org/10.1108/00220411311295351>
- Lupton, M. (2008). *Information literacy and learning*. Blackwood, Australia: Auslib Press.
- Partridge, H., Bruce, C., & Tilley, C. (2008). Community information literacy: Developing an Australian research agenda. *Libri*, 58, 110–122.
- Pope, J., Bond, A., Morrison-Saunders, A., & Retief, F. (2013). Advancing the theory and practice of impact assessment: Setting the research agenda. *Environmental Impact Assessment Review*, 41, 1–9. Available at: <http://dx.doi.org/10.1016/j.eiar.2013.01.008>
- Soleymani, M. R. (2014). Investigating the relationship between information literacy and academic performance among students. *Journal of Education and Health Promotion*, 3 (95). Doi: 10.4103/2277-9531.139677
- Uzuegbu, C. P. (2016). Effective information service delivery to rural dwellers in Sub-Saharan Africa: Whose job? *IFLA Journal*, 42 (1), 49–58. DOI: 10.1177/0340035215608860
- Uzuegbu, C. P. (2017). *Information Literacy on Cassava Farming: A Case Study of Farmers from Umuala and Umuokoroukwu Villages under Umuahia South Local Government Area in Abia State of Nigeria* (PhD Thesis). North-Eastern Hill University, Shillong, India.
- Uzuegbu, C. P. (2019). Impact of tailor-made information literacy provision on rural dwellers' participation in sustainable development targets in Nigeria: Implications for public library services to oral societies. *IFLA Journal*, 45 (2), 81-103.



Uzuegbu, C. P., & Naga, M. M. (2016). Information communication to rural cassava farmers in Nigeria: A pilot study. *Journal of Applied Information Science and Technology*, 9 (2), 120 – 132.

Williams, D., Cooper, K., & Wavell, C. (2014). *Information literacy in the workplace: An annotated bibliography*. Robert Gordon University. Retrieved from <http://www.researchinfonet.org/wp-content/uploads/2014/01/Workplace-IL-annotated-bibliography.pdf>.

Yates, C., Partridge, H., & Bruce, C. S. (2009). Learning wellness: How ageing Australians experience health information literacy. *Australian Library Journal*, 58, 269–285. Doi.10.1080/00049670.2009.10735905