
Access and Utilization of Rice and Agriculture-Related Information through One-Stop Information Shop (Osis) in State Universities in Region 02

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The availability of rice and agriculture-related information in state universities can contribute to the knowledge acquisition of agriculture students. Its accessibility through libraries and information centers heightens the quality and relevance of such information. The creation of One-Stop Information Shop (OSIS) in 6 state universities in the Cagayan Valley Region (Region 02) of the Philippines provided agriculture students the access to rice and agriculture-related Knowledge Products (KPs). This study investigates the access and utilization pattern on rice and agriculture-related information by agriculture students. Data was obtained through a structured Literature Search Survey with information provided by students. The OSIS was visited 2, 477 times by students, 97% of them were Bachelor of Science in Agriculture (BSA) students. The study found that the accessibility of the provided KPs affects the number of students' utilization. The nearer the location of the OSIS to agriculture students, the higher the percent utilization. The most frequently searched topic was the management of pests and diseases (36%). It can be linked to the reason that majority of the students who accessed and utilized the KPs were Crop Science major (74%). The use of Information Community Technology (ICT)-based tools and resources was generally low (5%) due to lack of computer and slow internet connection. A need-based library or information center is recommended to increase the utilization of KPs.

Keywords: rice and agriculture-related information, knowledge acquisition, knowledge products

Introduction

Over the years of research and technology development, agriculture information is growing exponentially. In a paper of Paskoff (1990) on the history and characteristics of Agricultural Libraries and Information in the United States, it was noted that most agricultural information from that time until the mid-nineteenth century was passed from one farmer to another by word of mouth. But with the establishment of agricultural libraries, relevant

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agricultural information was organized that resulted to the first Agricultural Revolution. “New advances in agricultural technology and increased dissemination of knowledge through agricultural literature inclusive of monographs, published works of agricultural societies, and the growing number of periodicals finally culminated (Paskoff, 1990).

One major factor that makes agricultural research libraries different from other information gateways is their ability to provide information resources and services unique to the institutions they serve (Uganneya *et al.*, 2012).

Libraries are facing challenges to meet the various needs of the users given the advent of the internet where all information is made accessible but difficult to filter. In a study of Lalotra and Gupta (2010) on Information Needs and Expectations in Digital Era: A Study of Select Agricultural Institutes in Northern India, it was noted that the lack of proper and timely information has a severe impact for agriculture sustainable growth. Lalotra and Gupta (2010) emphasized that users need the latest information about best practices instantly having a potential of improving efficiency and productivity of agriculture.

Thus, Agriculture university libraries play an important role in providing the right direction to the agricultural, scientific, and technological development of a nation as “Every library exists to serve the needs of its community of users. (Lalotra and Gupta, 2010).

As mentioned by Uganneya *et al.* (2012) in their study on Information services provision and user satisfaction in agricultural research libraries in Nigeria, the policy makers, researchers and stakeholders in agriculture are also of the opinion that information services provision and utilization are key components of research and development efforts in agriculture, thus the need for effective library and information service provision. In the said study, the authors noted that high quality information services provision is fundamental to research in agriculture, and the necessity to provide the information services rest squarely on agricultural research libraries in Nigeria.

However, several studies on use of agriculture libraries have shown that professors and students patronage of the library is generally low. Students primarily visit libraries during examination period for reading purposes. These attribute to lack of up-to-date reference materials, lack of awareness to available materials and the presence of internet.

In 2009, Biradar, Kumar, and Mahesh conducted a study entitled Use of information sources and services in library of Agriculture Science College, Shimoga: a case study which surveyed 101 agriculture students on the frequency, purpose and usefulness of agriculture science periodicals. Respondents of the said study visit library to read journals and magazines

(88.12%), to borrow books (87.12%), and to read newspapers (67.32%), to prepare assignments (58.41%) and to improve general knowledge (51.48%).

Over the years, the government of Nigeria has established several agricultural institutes, colleges and universities with supportive agricultural libraries or collections (Aguolu, 2000). The establishment of such, according to Aguolu (2000), has been to promote the study, teaching and research in agriculture. The institutions and their libraries generate and disseminate agricultural information or knowledge to agricultural extension workers, researchers, teachers, students, farmers as well as to policy makers in government.

Due to the fact that libraries remain the most credible source of information, it has to build and maintain a collection that will suit the needs of the users. Thus, agricultural research libraries are expected to acquire, organize, preserve, and disseminate information, as well to improve, stimulate and guide research in agriculture by coordinating the efforts of research findings in agriculture, setting in motion interaction and better working relation between producers and consumers of agriculture research (Uganneya *et al.*, 2012). University libraries are trying to reinvent themselves to be more appealing to students. In order to encourage library visit and use, libraries nowadays are arranged according to course or specialization. Agricultural libraries should provide reference, circulation, etc services to enable users to have access to desired information resources (Udekwe, 2007 cited by Uganneya *et al.*, 2012).

Hence, this study is anchored on what Uganneya *et al.* (2012) mentioned about putting emphasis on agricultural research libraries as a dissemination of specialized information primarily devoted to specialized information primarily devoted to a special discipline, offering specialized services to specialized clientele.

Objectives: This study aims to evaluate the agriculture students' access and utilization of rice and agriculture-related information through One-Stop Information Shop (OSIS) in state universities in Region 02. More specifically:

- a. To assess the usefulness of rice and agriculture-related information available in in state universities in Region 02;
- b. To determine the most frequently searched topic on rice and agriculture-related information among agriculture students in state universities;
- c. To determine the most frequently used material available in One-Stop Information Shop (OSIS) in state universities in Region 02.

Materials and methods

This study investigates the access and utilization pattern on rice and agriculture-related information by agriculture students in six (6) state universities in Region 02: Cagayan State University (CSU) – Gonzaga, Piat,

and Sanchez Mira campuses; Isabela State University – Cabagan and Roxas campuses; and Quirino State University.

In 2014, the Philippine Rice Research Institute – Isabela Station established an information center, otherwise called “One-Stop Information Shop” or OSIS, in the abovementioned state universities. The OSIS concept means that students can access and utilize all rice and agriculture-related KPs in just ‘one-stop’. The KPs include books, booklets, handouts and magazines. It also includes Information Communication Technology (ICT) materials such as compact disks (CDs) and PinoyRice Knowledge Bank (Offline version), a software that contains most rice farming information in the Philippines with downloadable materials. Data was obtained from the structured Literature Search Survey covering the School Year (SY) 2014 to 2016. Students who utilized the provided KPs in OSIS were asked to fill-in the information needed from the Literature Search Survey form. The data was consolidated and analyzed.

Results

Access and utilization of One-Stop Information Shop (OSIS) in 6 state universities

The data (Table 1) shows that respondents in 6 state universities utilized the KPs in OSIS 2, 477 times from School Year (SY) 2014 to 2016. Among the 6 state universities, the Isabela State University – Cabagan campus has the highest number of utilization of 780 (31%) followed by Isabela State University – Roxas campus (601; 24%) and Cagayan State University – Gonzaga campus (474; 19%).

The OSIS in each state university were located either as part of the Agriculture Building or in a separate building. Based from the data indicated in Table 2, the accessibility of OSIS in each state university affects the number of utilization.

Furthermore, the respondents were asked to evaluate the accessibility of OSIS according to user satisfaction using the Likert Scale. The table below (Table 3) shows that majority of the respondents were either Very Satisfied (62%) or Satisfied (31%) in terms of OSIS accessibility.

Majority of those who accessed and utilized the OSIS were students of Bachelor of Science in Agriculture (BSA) (92%). Only 8% of the respondents were from other courses such as Business Administration as well as Arts and Sciences. As shown in Table 4, BSA-Crop Science major students (74%) utilized the OSIS more often than BSA-Animal Science major (26%).

Table 1. Respondents' utilization of Knowledge Products (KPs) in One-Stop Information Shop (OSIS) of six (6) state universities

State university	Number of students			TOTAL
	SY 2014	SY 2015	SY 2016	
Cagayan State University – Gonzaga Campus	0	158	316	474
Cagayan State University – Piat Campus	0	58	43	101
Cagayan State University – Sanchez Mira Campus	0	106	49	155
Isabela State University – Roxas Campus	288	289	24	601
Isabela State University – Cabagan Campus	555	48	177	780
Quirino State University	76	249	41	366
Total	919	908	650	2477

Table 2. Utilization percentage and its relation to the location of One-Stop Information Shop (OSIS) in state universities

State university	Utilization percentage	Description of OSIS location
Cagayan State University – Gonzaga Campus	19%	Within the Agriculture Building
Cagayan State University – Piat Campus	4%	Campus library beside the Agriculture Building
Cagayan State University – Sanchez Mira Campus	6%	Campus library in front of the Agriculture Building
Isabela State University – Roxas Campus	24%	Campus library beside the Agriculture Building
Isabela State University – Cabagan Campus	31%	Within the Agriculture Building
Quirino State University	15%	Within the Agriculture Building
Total	100%	

Table 3. Assessment of OSIS accessibility according to the respondents

LIKERT SCALE	Accessibility of OSIS (%)
5=Very Satisfied	62%
4=Satisfied	31%
3=Neither Satisfied or Dissatisfied	5%
2=Unsatisfied	1%
1=Very Unsatisfied	0%
Total	100%

Table 4. Course specialization of the respondents accessing and utilizing the OSIS

Course	Percentage
Bachelor of Science in Agriculture major in Crop Science	92%
major in Animal Science	74%
Other courses	26%
Total	100%

Students' information and knowledge needs

Using the Literature Search Survey form (see Figure 1), the students' information and knowledge needs were analyzed. The respondents' research queries were categorized according to three (3) categories: Rice-related topic, Agriculture-related topic, and others. Table 5 shows that majority of the respondents (83%) sought rice-related topic as compared to agriculture-related topic (16%).

No.	NAME	COURSE/FIELD OF SPECIALIZATION	RESEARCH QUERY	SEARCH RESULT <small>(pls. indicate the title and the type of information, education, and communication IEC material)</small>		PLEASE RATE US (pls. put a check mark) 1=LOWEST; 5=HIGHEST														
				TITLE OF THE IEC MATERIAL	TYPE OF IEC MATERIAL <small>(e.g. Book, Journal, etc. indicate the source)</small>	AVAILABILITY of need IEC material					SUITABILITY of available IEC material					ACCESSIBILITY of IEC material				
						1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1.	Dandrico Garlit Jr.	BSA An.sci	Poultry tips	IKAW 92 Poultry	Handout															
2.	Rayson Salvador	BSP An.sci	How raising ducks	How to raise ducks	Book															
3.	Wilbert Andres	BSP An.sci	How raising ducks	How to raise ducks	Book															
4.	Rhoian M. Tumagco	BSP An.sci	Poultry tips	Poultry Production Guide	Magazine															
5.	Rogiero Astang	BSP Crop Sci	Rice disease	Handout on rice disease	Poster															
6.	Jaymar Tolentino	BSP An.sci	How raising ducks	How to raise ducks	Book															
7.	Jose Victorino	BSP An.sci	Egg production	How to raise ducks	Handout															
8.	Hannia M. Olana	BSP Crop Sci	Rice disease	Handout	Handout															
9.	Christian Multiso	BSP An.sci	Egg production	Handout	Handout															
10.	Janine Poma	BSP Crop Sci	Rice disease	Handout	Handout															
11.	Joshua Miguel	BSP Crop Sci	Rice disease	Rice production	Book															
12.	LEO ANUELO GARCIA	BSP An.sci	Poultry tips	Handout	Handout															
13.	Sambiro Raymak	BSP Crop Sci	Poultry tips	Handout	Handout															

Figure 1. Sample Literature Search Survey form

Table 5. Categories of respondents' information and knowledge needs

Information and knowledge needs	Percentage
Rice-related topic	83%
Agriculture-related topic	16%
Others (PhilRice advocacy campaign)	2%
Total	100%

Shown in Table 6, the respondents' most frequently sought information on rice-related topic was on Pests and Diseases (35.9%) followed by rice production in general (30.5%) and Weeds Management (12.7%). The Variety and Seed Selection as well as Post-harvest category can be expounded to sub-categories. In terms of Variety and Seed Selection (see Table 7), respondents were interested to gain information and knowledge on Hybrid Rice (43%). While, in terms of Post-harvest (see Table 8), majority of the respondents sought Rice by-product (75%) information.

Table 6. Respondents' information and knowledge needs on rice-related topic

Information and knowledge needs on rice-related topic	Percentage
Rice production (in general)	30.5%
Rice production and Climate Change	2.7%
Rice Ecosystem	0.7%
Variety and Seed Selection	6.8%
Nutrient Management	5.9%
Pests and Diseases Management	35.9%
Soil and Water Management	0.5
Post-harvest Management	1.8%
Socio-economics of rice	2.5%
Weeds Management	12.7%
Total	100%

Table 7. Sub-category of Variety and Seed Selection information and knowledge needs of the respondents

Variety and seed selection Sub-category	Percentage
Hybrid Rice	43%
Inbred Rice	17%
Rice Breeding	7%
Quality Rice and Seeds	10%
Rice Varieties	23%
Total	100%

Table 8. Sub-category of Post-harvest Management information and knowledge needs of the respondents

Post-harvest management Sub-category	Percentage
Rice by-product	75%
Rice bio-waste management	13%
Post-harvest technology	13%
Total	100%

In terms of Agriculture-related topic (see Table 9), majority of the respondents (46%) were interested to gain information and knowledge on the production technology of Other Commodities (High value crops). Interestingly, there were 12% of the respondents who sought information related to Work in Agriculture.

Table 9. Respondents' information and knowledge needs on agriculture-related topic

Information and knowledge needs on agriculture-related topic	Percentage
Agribusiness	7%
Agricultural Engineering	6%
Work in agriculture	12%
Technologies in agriculture	7%
Animal Science	18%
Other Commodities	46%
Organic Farming	4%
Total	100%

Availability and suitability of Knowledge Products (KPs) in OSIS

The OSIS was composed of different types of Knowledge Products (KPs) such as books, booklets, handouts, magazines, and Information and Communication Technology (ICT)-based tools and resources. Table 10 shows the comparison of the available and utilized KPs of the respondents, categorized according to type of KPs. The result shows the relationship between availability and utilization of KPs. Books and Booklets account to 37% and 32%, respectively, among the KPs available in OSIS. Books (38%) and Booklets (35%) were the two of the highest percentage of utilization among the KPs available. The use of Information and Communication Technology (ICT)-based tools and

resources only account to 5% among the materials utilized due to lack of available computer and slow or no internet connection at all.

Respondents were asked to assess the availability and suitability of KPs according to their satisfaction using the Likert Scale (Table 11). In terms of the availability of the needed KPs, majority of the respondents were Very Satisfied (72%). Similarly, in terms of suitability of the available KPs, the respondents were Very Satisfied (81%).

Table 10. Comparison of Knowledge Products (KPs) available in OSIS and KP utilized by the respondents

Type of Knowledge Products (KPs)	Available KPs in OSIS	Utilized KPs in OSIS
Books	37%	38%
Booklets	32%	35%
Handouts	12%	12%
Magazines	12%	10%
Information and Communication Technology (ICT)-based Tools and Resources	7%	5%
Total	100%	100%

Table 11. Assessment of the availability and suitability of Knowledge Products (KPs) according to the respondents

Likert Scale	Availability of the needed KPs (%)	Suitability of the available KPs (%)
5=Very Satisfied	72%	81%
4=Satisfied	19%	13%
3=Neither Satisfied or Dissatisfied	6%	5%
2=Unsatisfied	3%	1%
1=Very Unsatisfied	0%	0%
Total	100%	100%

Discussion

Since libraries, or information centers for this matter, remain the most credible source of information, building and maintaining a collection that will suit the needs of the users is necessary. The One-Stop Information Shop (OSIS) concept provides unique information resources and services such that it was established to cater the information and knowledge needs of agriculture

students in state universities. Hence, a need-based library or information center is recommended to increase the utilization of Knowledge Products (KPs).

In terms of accessibility, it is important to note that in the establishment of information centers, such as OSIS, proximity to the users shall be considered. The utilization of KPs in OSIS is largely affected by its proximity to the respondents. State universities with OSIS located within the Agriculture Building tend to have higher number of utilization.

The findings of the study suggests that appropriate and timely information contributes to the overall information and knowledge needs satisfaction of the students. The information seeking pattern of the respondents was largely determined by the information sources and their availability in terms of proximity and format (Mugwisi, Ocholla, Mostert, 2013). In terms of utilization, the study revealed that the availability of KPs correlate to its utilization. This is similar to the claim of Abosede and Ibikunle (2011) that as relevant textbooks become available, the use of the library increases. Books were the most frequently consulted among other KPs. The use of Literature Search Survey form helped in assessing the access and utilization of OSIS in state universities. Based on the findings, the following recommendations are made:

- a. As the result of this study revealed that the majority who access and utilize the OSIS were Bachelor of Science in Agriculture students. The information and knowledge needs of students were based on their courses' needs. Hence, to further increase the number of OSIS users, the inclusion of the available Knowledge Products (KPs) in OSIS in the course syllabi is necessary.
- b. The OSIS in state universities can also be linked with other agriculture-related institutions to create a diverse collection of updated information to suit the information and knowledge needs of agriculture students.
- c. The percentage of respondents using the ICT-based tools and resources in OSIS is generally very low due to lack of available computer and slow or no internet connection. Libraries or information centers should invest in computer laboratories with high internet connectivity to improve the utilization of ICT-based tools and resources in rice and agriculture.

For further studies, this study recommends that the respondents be profiled according to their age, gender, and year level; then correlate it to their information and knowledge needs. Such profiling is needed to generate specific recommendation in terms of improving the collection of Knowledge Products (KPs) in OSIS.

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