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Surveying Attitude and Use of Institutional Repositories (IRs) by Faculty in Agriculture Disciplines: A Case Study

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Abstract

Over the last few years there has been increase in awareness of the importance of institutional repositories (IRs) in scholarly communication in tertiary institutions. However, low participation of faculty in contributing their intellectual products has been a great concern because it has not allowed institutional repositories to achieve its full potentials. Awareness and attitude among others are factors affecting the use of IR. This paper examines the level of awareness, attitude to use of institutional repositories and challenges faced by faculty in Agriculture disciplines in Federal University of Technology, Akure, (FUTA) Nigeria. Survey method was adopted; data was collected through questionnaire and analyzed using descriptive statistics. The study integrated diffusion of innovation (DOI) and theory of reasoned action (TRA) to understand the awareness and attitude to use of IR. The findings suggest that the level of awareness about IRs by faculty members is increasing; however, there was variation in the level of awareness across agriculture disciplines. In addition, there seems to be general positive attitude to IR, yet there was low submission of scholarly works by faculty. Finally, it was revealed that the use of IR is jointly determined by level of awareness and attitude.

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Keywords: Institutional Repositories; Agriculture Disciplines; Awareness; Attitude; Use of Institutional Repositories.

1. Introduction

One of the new scholarly communication platforms made possible by the Internet in the twenty-first Century is Institutional Repository (IR). In recent times IR has become a springboard for disseminating scholarly works in tertiary institutions and it is a valuable solution to serials crisis. The benefits of IR are immense; as a result, many universities have implemented it. Crow (2002) and Prosser (2003) see IR as appropriate model that performs the four functions of scholarly communication: 'registration', 'awareness' 'certification' and 'archiving'. Johnson (2002) comparing IR and the traditional scholarly model submits that traditional model limits readership, obscures

institutional origin, costs much but IR model implies no monopoly, increase of output, and awareness, which is the essence of scholarly communication. However, global trends have shown that as laudable as IR is, one of the major challenges to the realization of its full potentials is content recruitment. Previous studies have persistently reported low submission of scholarly works by faculty members who are the major authors of scholarly works Ware (2004) and Nicholas, Rowlands, Watkinson, Brown, and Jamali (2012).

Factors that are responsible for low submission of scholarly works by faculty members are the imperative issues to consider. The submission of Dolan (2011), which states the need to study faculty members in order to understand their use of IR is of great interest. This is pertinent in order to justify the huge amount of money expended by IRs. Meanwhile, Jackman (2007) cautions that a “one-size-fits-all” approach in IR development would not satisfy the needs of varied academic units, hence, there is need to study each discipline. Though, there are studies on awareness, attitude and use of IRs by faculty of various disciplines, they are not focused on faculty in agriculture disciplines. In addition, there are few studies in Nigeria that focus generally on faculty attitude to use of IR and in particular none focus on agriculture disciplines.

Chan and Costa (2005) acknowledged awareness of IR concept, its purposes, benefits, impact and its existence as one of the factors influencing use of scholarly communication model in open access environment. Previous studies such as Crow (2002) and Rowland and Nicholas (2005) reported variations in the level of awareness and the use of IR by faculty members as a result of disciplinary differences. Besides, attitude is another important factor to consider in relation to use of IR because the general assumption is that people behave in accordance with their feelings and beliefs.

This paper forms a preliminary part of a doctoral research currently in progress. It aims at investigating factors that determine use of IR by faculty in agriculture disciplines. The specific objectives are to understand the level of awareness, attitude to use of IR by faculty in the School of Agriculture and Agriculture Technology (SAAT), Federal University of Technology, Akure, (FUTA) Nigeria. The Federal University of Technology Akure, is a Federal Government owned university founded in 1981. It has six schools namely; Science, Earth and Mineral Sciences, Environmental Technology, Engineering and Engineering Technology, Agricultural and Agricultural Technology, and Management Technology. FUTA launched her IR in 2011 with DSpace software and has 2346 items (Articles, References and Theses) as at March, 2013 (OpenDoar website).

2. Methodology

The research adopted descriptive survey; a simple random sample technique was used to select eighty (62%) faculty across the rank out of one hundred and twenty-nine from eight departments in the School of Agriculture and Agricultural Technology (SAAT), Federal University of Technology, Akure, Nigeria. The questionnaire was structured based on two theories: Diffusion of Innovation (DOI) and Theory of Reasoned Action (TRA) and was distributed for a period of two months, March and April 2013. The questionnaire comprised questions on (age, gender, and discipline), awareness level, attitude to use of IR and challenges of use of IR.

Questions on awareness contained ten positive statements on four-point likert scale option to measure level of awareness and source of awareness. The question on attitude consisted ten positive statements on four-point likert scale option adapted from Zolait and Sulaiman (2008). Two questions were asked on use of IR, and lastly questions on challenges of IR contained ten items on likert scale. The answer options for the likert scale in all the sections were ‘strongly agree’, ‘agree’, ‘disagree’ and ‘strongly disagree’ with scores 4 to 1 respectively.

Data were entered into SPSS for further analysis using percentage, mean and standard deviation. Also Pearson Product Moment and Multiple regressions were used for the hypotheses.

3. Results and Discussion

3.1 Characteristics of sample population

Out of a hundred and twenty-nine faculty members of School of Agriculture and Agriculture Technology, eighty (62%) were sampled and fifty-one (63.75% response rate) responded, of whom 67 % were male and 33% female. The respondents were from eight departments as follows: 3(5.8%) from Agriculture and Extension Department, 7(13.7%) from Animal Production and Health, 8(15.7%) from Crop Soil and Pest Management, 6

(11.8%) from Agriculture and Resource Economics, 5 (9.8%) from Ecotourism and Wildlife Management. Others were 7(13.7%) from Fisheries Aquaculture Technology, 7(13.7%) from Food Science and Technology and finally, 8(15.7%) from Forestry and Wood Technology.

3.2 IR Awareness level of faculty in School of Agriculture and Agriculture Technology (SAAT)

Out of ten statements measuring awareness, the mean response for 6 (60%) statements indicated that the respondents agreed that there is adequate awareness of IR by faculty members in the School of Agriculture and Agricultural Technology, FUTA as shown in table 1. The sum of scores for the items on level of awareness which was 10-40, and 10-14 was designated as low, 15 -24 as moderate while 25 – 40 as high. Out of fifty-one respondents, 16 (31%) had high level of awareness, 18(35%) had moderate level of awareness while 17(34%) had low level of awareness. This implies that though respondents claimed to have adequate awareness of the existence of their university IR, there was variation in their level of awareness. This finding is similar to the study by Creaser, Fry, Greenwood, Oppenheim, Proberts, Spezi, and White (2010) that found variation in the awareness level of faculty across the disciplines in all the countries in the European Union. However, a comparison of this result with the earlier study of Christian (2008) on IR awareness level of faculty in University of Lagos, Nigeria that showed that only three percent (3%) were completely familiar with open access IR, there seems to be an improvement in the level of awareness of IR by faculty members in Nigeria.

On the other hand, it was evident that most of the respondents did not know how to deposit their works on the IR of their university. In addition, their knowledge of the content of their university IR was inadequate as the mean response of the two statements was disagreed. It suggested that the respondents were not conversant with their university IR. Besides, the respondents got informed about IR mainly through the university library and their colleagues.

Table 1: Awareness level of faculty in SAAT

S/N	Statement	Mean	Std. Deviation	Remarks
1	I am aware of the existence of my university IR	3.29	.986	A
2	I know the meaning of IR	3.18	.953	A
3	I am aware of the purpose of IR	3.16	.967	A
4	I am aware of the content of my university IR	2.15	.495	D
5	I know the benefits of using IR	3.41	.779	A
6	I know how to deposit my scholarly works in to my university IR	2.08	.445	D
7	I got to know about IR through our university library	3.06	1.008	SA
8	Mass media informed me about IR	2.04	.420	D
9	I got to know about IR through my colleagues	3.25	.913	A
10	My Departmental meetings consistently remind me	3.24	.885	A

3.3 Attitude to Use of IR by faculty in School of Agriculture and Agriculture Technology (SAAT)

The results as presented in table 2, the mean response for all the statements except statement 8 indicated that the respondents agreed that attitude towards the use of IR by faculty in the School of Agriculture Technology was positive. Nevertheless, there was variation in attitude to IR by faculty members as this was evident in the scores. The sum of scores 10-40 and 10 -14 was designated as weak, 15 -24 as moderate while 25 – 40 as good. It was found that 17 (33.3%) had weak attitude, 19 (37%) had moderate attitude and 15(29%) had good attitude. Similar studies by Abrizah (2009) and Dolan (2011) found that faculty generally had supportive attitude to IR.

Table 2: Attitude to use of IR by faculty in SAAT

S/N.	Statement	Mean	Std. Deviation	Remarks
1	IR services are good idea	3.00	.600	A
2	Using the IR is a pleasant experience	2.96	.528	A
3	I use IR when my colleagues have successful experience of using i	2.92	.483	A
4	I use IR when I have seen others using it	3.00	.600	A
5	IR is compatible with most aspects of my work	2.98	.547	A
6	I use IR on a trial basis	2.90	.539	A
7	IR enables me to accomplish my research works more quickly	2.92	.392	A

8	IR improves the quality of my work	2.20	.310	D
9	Learning to self archive is easy for me	2.88	.516	A
10	My peers think I should use IR	2.72	.365	A

3.4 Challenges of use of IR as perceived by faculty in Agriculture and Agriculture Technology

The results of this study showed as follows: the mean response for statements 1, 4, 5, 6, 7, 9 and 10 indicated that the respondents agree that there were challenges to use of IR. The mean response for statements 2, 3 and 8 implied that the respondents strongly agreed that there were challenges to use of IR. Lack of awareness of IR, epileptic power supply in the country, fear of not being able to publish works submitted in IR, fear of plagiarism, ignorance of publishers policy among others were challenges faced by faculty members. This is in consonance with two previous studies; Christian (2008) and Nwokedi (2011) that highlighted the major barriers to use of IR by faculty in University of Lagos and University of Jos as lack of awareness or ignorance, fear of plagiarism, constant power failure, copyright issues, server unavailability and lack of time.

3.5 Use of IR by faculty in School of Agriculture and Agriculture Technology, FUTA

The faculty were asked how they used IR, 4 (7.8%) had submitted their scholarly works in their university IR and had searched it as information source. Thirty (58.8%) had not submitted their scholarly works into their university IR but had searched the IR as information source while 17 (33.4%) had neither submitted their scholarly works nor searched the IR.

3.6 Hypotheses

Ho1: There is no significant relationship between awareness and use of IR by faculty in Agriculture Disciplines in Federal University of Technology, Akure Nigeria. The result indicates $t=0.59 < t_{0.01}$, $t = 0.59 < t_{0.05}$, 8. Therefore the null hypothesis is accepted at both levels of significance. This means that the use of IR will increase when there is increase in the level of awareness as shown in table 3.

Ho2: There is no significant relationship between attitude and use of IR by faculty in Agriculture Disciplines in Federal University of Technology, Akure Nigeria. The result is $t=1.48 < t_{0.01}$, $t = 0.59 < t_{0.05}$, 8. The null hypothesis is accepted at both levels of significance, meaning that the use of IR will increase as negative attitude decreases as shown in table 3. This finding is in agreement with a similar study by Lawal (2002).

Table 3: Result of Hypotheses one and two

		Use of IR	Awareness	Attitude
Use of IR	Pearson Correlation	1	.204	-.463
	Sig. (2-tailed)		.572	.178
	N	10	10	10
Awareness	Pearson Correlation	.204	1	-.627
	Sig. (2-tailed)	.572		.053
	N	10	10	10
Attitude	Pearson Correlation	-.463	-.627	1
	Sig. (2-tailed)	.178	.053	
	N	10	10	10

Ho3: Hypothesis three was tested to measure joint effect of awareness and attitude on use and multiple regression was used and the results is shown in table 4. F is used to infer in case of multiple regression. Since $F = 1.025$ and $F_{table} = 0.407$, $F > F_{table}$, therefore the null hypothesis three is rejected which stated that there is no joint effect of awareness and attitude on use of IR by faculty in Agriculture and Agriculture Technology, Federal University of Technology, Akure, Nigeria. This means only level of awareness cannot have a significant

relationship on use of IR but both awareness and attitude will have (See table 4: ANOVA).

Table 4: Hypothesis three ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.015	2	.008	1.025	.407(a)
	Residual	.052	7	.007		
	Total	.067	9			

a Predictors: (Constant), Attitude, Awareness b Dependent Variable: Use of IR

4 Conclusion

Development of institutional repositories in Nigerian universities is steadily increasing, though the pace is slow when compared with many developed nations. The survey findings suggested that the level of awareness about IRs by faculty members is increasing, but there was variation in the level of awareness across agriculture disciplines. Awareness of existence of IR, the meaning of the concept and benefits did not translate to use. In addition, there was a general positive attitude to IR, yet there was low submission of scholarly works by faculty. Finally, the use of IR is jointly determined by level of awareness and attitude.

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