

Effect Of Motivation and Job Satisfaction on Research Productivity of Lecturers in Public Universities in North-West Zone, Nigeria: Implication for Policy Making

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ABSTRACT :The academic landscape revolves around research and scholarship, with University lecturers being its architects. Their passion for knowledge, critical thinking, and dedication to research drive advancements in various disciplines. However, research productivity is not solely dependent on intellectual prowess but influenced by several factors such as the lecturers' internal state, particularly their motivation and job satisfaction. This paper examined the effect of motivation on productivity of lectures in public Universities of North-west Nigeria. One of the problems that prompted the study was brain drain and low research output which is affecting the intellectual capacity of the Universities as well as their overall productivity. Four research questions were raised and four research objectives were equally formulated to guide the study, one of them is: to identify the impact of extrinsic motivation on research productivity of lecturers. A descriptive survey research design was adopted for the study and the population of the study was all lecturers in the Faculties of Education in public Universities of north-west Nigeria. The sample of the study consisted of 11 out of 14 public Universities selected using purposive sampling technique. Research advisors (2006) table for determining sample size was used to select sample size of the lecturers, which recommended 248 out of a population of 782 lecturers. Proportionate sampling technique was used to determine sample size required per each institution under the study. The study used Questionnaire titled "Effect of Motivation and Job Satisfaction on Productivity of Lecturers Questionnaire (EMJSRPLQ) as the instrument for data collection. The reliability of the instrument was determined through pilot study using a test-retest method, the scores of the two test was analyzed using Cronbach alpha and the reliability index of 0.75 was realized. Findings of the study revealed among others that, extrinsic motivation has an influence on research productivity of lecturers and one of the recommendations made was that, the University management should provide more extrinsic motivational strategies in order to enhance research productivity of lecturers.

KEYWORDS: *Motivation, Extrinsic Motivation, Intrinsic Motivation, Job Satisfaction, and Research Productivity.*

I. INTRODUCTION

The academic landscape revolves around research and scholarship, with University lecturers being its architects. Their passion for knowledge, critical thinking, and dedication to research drive advancements in various disciplines. However, research productivity is not solely dependent on intellectual ability but also influenced by several factors such as the lecturers' internal state, particularly their motivation and job satisfaction. Onu, Akinlabi and Fakunmoji (2014) opined that, the productivity level of lecturers is not only a function of qualification and competence but also of motivation.

Motivation here means the way and manner in which an individual or group of individuals are inspired to behave in a desired manner with a view to receiving some positive rewards or to satisfy certain human needs. To be motivated is to do something which is different i.e. to do more than you have to do not because you are told to but because you want to. Uzonna (2013) defined motivation as the intention of achieving a goal, an ability to change behaviour, that inner directing drive leading to goal-directed behaviour towards attaining a goal. Similarly, Wigfield in Lipsey, Emmanuel and Fakuo (2015) sees motivation as the psychological feature that stimulates an organism to act towards a desired goal, elicits controls and sustain certain goal directed behaviour. Explaining the concept in the context of organizations, Nnaeto and Ndo (2018) opined that motivation is when organization had observed what is created to satisfy the need of individual members who work to achieve the objectives of that organization.

Therefore, to motivate is to induce, persuade, stimulate and even compel an employee to act in a manner which fulfills the objectives of an organization. Onuka in Uyeri (2016) stated that, every organization regardless of its size must provide for the needs, interest and desire of its employees within the work environment if it is to earn their loyalty, dedication, involvement and commitment necessary to compete effectively. In agreement Bawa (2017) stressed that, when employees are motivated and satisfied with the workplace, they become more productive and the organization can progress and achieve success. Thus, in order to maintain productivity, employees' skills and knowledge must be continually updated. Quratul-Ain (2013) also highlighted, the factors that enhance employee motivation at workplace which include: fair pay, incentives, joint decision making, adequate feedback, recognition, identification and fulfilling of needs, encouragement, trust, respect, leadership, fringe benefit, special allowances, importance attached to the job, training, loyalty, quality of supervisor, inspiration, empowerment, information availability and communication to perform actions. Similarly, Aworemi, Abdul-Azeez and Durowoju (2011) in their study, identified seven motivational factors which include: job security, personal loyalty to employees, interesting work, good working conditions, good wages, promotion, growth in organization and full appreciation of work done.

According to Jarret (2011) there are only two means of motivating people; one is through material satisfaction by providing tangible rewards called extrinsic motivation and the second way is through non-material satisfaction by providing intangible rewards called intrinsic motivation. Extrinsic motivation involves the provision of an attractive compensation and benefits package. This include; salaries, health benefits, and bonuses. While intrinsic motivation can be done through provision of effective substance for promotion, training and development as well as recognition, the act of praising an employee for a job well done is another means of doing so. Migosi (2011) in his investigation of factors motivating business academics to undertake research in a Kenyan university, among 14 factors examined, self-motivation (intrinsic) of academics, research content knowledge, research skills gained and early orientation to research were found to have the greatest influence on research productivity. Herzberg in Bawa (2017) explained further that, intrinsic motivation factors such as: drive for achievement and adjustment, being treated in a caring and considerate manner and receiving positives recognition are inherent in the job itself which the individual enjoys as a result of successful completion of the task, this produce job satisfaction and motivate employees to work harder. Chapman in Jarret (2011) is of the opinion that motivation is related to teacher job satisfaction but not to teacher classroom practices

Job satisfaction encompasses a positive emotional state resulting from the fulfilment of an individual's needs and desires within their work environment. When lecturers feel satisfied with their jobs, they experience greater engagement, increased creativity, and a stronger commitment to their research endeavours. This can translate into higher research output, improved quality of publications, and ultimately, greater contribution to their field. Lertputtarak (2008) reported that a positive atmosphere influence lecturers to perform research tasks. Similarly, Christopher (2014) found that induction service, promotion based on merit, delegation of administrative work, good welfare programmes, guidance and counseling services are some of the leading factors influencing job satisfaction.

Therefore, there is need to understand the urges, needs and desire of the lecturers that can be stimulated to enhance productivity. Interestingly, Universities employ a range of means to give lecturers incentives to demonstrate high research productivity. Zhang (2014) opined that motivational factors that drive academic research can be extrinsic factors or a combination of both extrinsic and intrinsic motivation. Giancola (2014) argues that extrinsic motivation is not linked to the satisfaction the employee gets from performing the task itself but from the external outcomes of the task such as financial rewards or incentives. Geroge and Jones (2012) also opined that, extrinsically motivated employees are motivated when they get positive appraisal or reinforcement provided by other people and they are often motivated by factors like salary or bonus, salary raise or promotion.

Thus, extrinsic motivation mainly focuses on factors that are goal driven such as rewards and benefits of performing a certain task whereas intrinsic motivation is usually means the pleasure and satisfaction that an employee gets when performing an activity (Lin in Muhammad 2020). Some examples of the extrinsic motivational factors are performance related pay, promotion, various types of bonus, monetary rewards such as salary increase, tenure, performance appraisal, among others. Evans in Maria, Virgilio, Rui, Jose & Odelia (2011) also highlighted some ways to motivate lecturers which include: giving lecturers a voice by effective consultation and sharing of decision making, motivation through recognition of efforts, achievements (reminding thus, staff commitment and conscientiousness are appreciated), adopting a teacher centered leadership, because it is not just about working with teaching and other staff for the good of the students but also about for the good of the faculty..

Indeed, motivation is highly demanded to ensure that employees are always at their optimum productivity. Productivity was described as the optimal utilization of resources in the production of goods and rendering of services that meets predetermined objectives (Bawa, 2017). Broadly, productivity captures human ability to transform physical and human resources to produce the desired output.

High productivity is essential to the overall success of the organization. According to Cubicle (2018), higher productivity means accomplishing more with the same amount of resources or achieving higher output in terms of volume and quality from the same input. Akrani (2013) identified 3 main indicators of high productivity as follows; best utilization of available resources (human and material resources), minimum wastage of resources and losses of materials as well as quantitative and qualitative production of goods and services at a lower cost.

In Nigerian Universities, one of the criteria for promoting lecturers from one rank to the other is lecturers' productivity defined in terms of research output or publications in referred national and international journals and text books and also educational qualifications obtained (Peretimode & Chukwuma, 2015). Similarly, Zhang (2014) observed that, lecturers' research productivity in most Universities worldwide is determined by the number published articles in internationally refereed journals and conference proceedings which are the usual channels for the dissemination of research and development activities among researchers.

Therefore, research productivity is typically defined by the number of publications in academic refereed journals and scholarly books. Sometimes, the number of presentations at professional meetings is also included as are grants proposals, awards and the dollar amount of grants (Wilson in Zhang 2014). Indeed, the assessment of research productivity in academic institutions is an important measure of the extent of their contribution to developing new knowledge (Tess, Furuie, Castro, Barreto Mdo & Nobre, 2009). Similarly, Haines, Redman, Jorm, Wozniak & Lujic (2010) noted that, faculty publishing is often used as an index for departmental and institution prestige and is strongly associated with individual organization and environmental factors. Publication counts, articles printed in well-known academic journals and research grants are among the common measures of faculty research productivity (Alganim & Alhamani, 2011).

Research publication enables academic staff to earn recognition in academic circles. Udida and Udey in Olatkunbo (n.d.) observed that in higher education, publications often served as criteria for promotion, tenure and salary. Research productivity is also measured in terms of professional development opportunities such as conference presentations, research seminars and the number of grant proposals submitted and research grants received. (Kaya & Weber in Nguyen, 2009). However, it is important to note that although employees used multiple measures to investigate faculty research productivity in an attempt to be more objective, there is no agreement among scholars on what constituted objective criteria that could be used to evaluate research productivity since each criterion has its own merits and deficiencies (Arriola, Quiroz, Curioso, Cruz-Encarnacion & Gayoso, in Muhammad 2020).

Also, Nguyen (2009) highlighted that research productivity is the most important criterion for the ranking of the world's Universities conducted by ranking systems such as Times Higher Education, QS World Ranking Universities and Academic Ranking of World Universities. Therefore, high quality and quantity of research productivity enhance the prestige and reputation of lectures and Universities both nationally and globally.

However, despite the significance of research in professional development and advancement of knowledge, the North-West Zone of the country grapples with a persistent challenge: Low research productivity among its University lecturers. The researcher equally observed that many lecturers are not satisfied with their jobs. Some lecturers are leaving the institutions while others are not performing optimally which is affecting the intellectual capacity of the institutions as well as their overall productivity. Those challenges are linked to lack of adequate motivation and job satisfaction. This is because of the fact that people are motivated by different things in life. Some are motivated by tangible rewards such as money or other monetary incentives while others are motivated by intangible reward such as respect or recognition for a job well done (Zang, 2014). This issue demands close examination, considering the vital role research plays in driving innovation, informing policy, and enhancing global competitiveness. Thus, the thrust of this study is to examine the effect of motivation and job satisfaction on research productivity of lecturers in public universities of North-west zone, Nigeria.

Research Questions

The following research questions were formulated to guide the study:

1. What are the kind of research engagements of lecturers in public Universities of North-west, Nigeria?
2. What is the impact of extrinsic motivational strategies on research productivity of lecturers in public Universities of north-west Nigeria?
3. What is the impact of intrinsic motivational strategies on research productivity of lecturers of Public Universities in north-west Nigeria?
4. What is the impact of job satisfaction on research productivity of lecturers of Public Universities in north-west Nigeria?

Research Objectives

The specific objectives of the study are to:-

1. Identify the kind of research engagement of lecturers in public Universities of North-west, Nigeria.
2. Identify the impact of extrinsic motivational strategies on research productivity of lecturers in public Universities of north-west Nigeria.
3. Identify the impact of intrinsic motivational strategies on research productivity of lecturers of Public Universities in north-west Nigeria.
4. Identify the impact of job satisfaction on research productivity of lecturers of Public Universities in north-west Nigeria.

II. METHODOLOGY

This study used a descriptive survey research design. The population of the study comprised of all the lecturers from the Faculty of Education in public Universities in North-west Nigeria. The total population of public Universities in North-west geo-political zone is 14 with a total of 782 lecturers in the Faculties of Education. Purposive sampling technique was used to select 11 out of 14 public Universities under study; this is because the study was interested in lecturers from the faculty of education only. Research Advisors (2006) table for determining sample size was used to determine the sample size of lecturers and it recommended a sample size of 248 lecturers for the study. Proportionate sampling technique was used to determine the lecturers sample size required from each university under study. A questionnaire titled "Effect of Motivation and Job Satisfaction on Research Productivity of Lecturers (EMJSRPLQ)" was used for data collection. The questionnaire was adapted from Muhammad (2020). All the items on the questionnaire are closed ended questions where respondents are restricted to pick one response on opinions proposed from four Likert scale responses provided such as: Strongly Agree (SA) 4 points, Agree (A) 3 points, Disagree (D) 2 points and Strongly Disagree (SD) 1 point.

Pilot testing of the questionnaires was conducted in order to ensure reliability of the instrument. A test-retest reliability method was applied, the scores of the two test were correlated through the Cronbach's alpha reliability method and the reliability index derived was 0.73. The analysis was conducted with the help of Statistical Package for Social Science (SPSS) software.

III. RESULT

The result from the data analysis is presented as follows:

RQ₁: What are the kind of research engagement of lecturers in public Universities of North-west, Nigeria?

The research Question one was answered and presented in table 1 below

Table 1: Opinion of respondents on research engagements of lecturers in public Universities of North-west, Nigeria.

S/N	Item statements	Agreed Freq.	(%)	Disagreed Freq.	(%)
1.	I have authored a book (s)	147	59%	101	41%
2.	I have co-authored a book	149	60%	99	40%
3.	I have contributed chapters in book of readings	175	71%	73	29%
4.	I have published in an international journal	200	81%	48	19%
5.	I have published in a local journal	202	82%	46	18%
6.	I have presented seminar papers	196	79%	52	21%
7.	I have presented paper(s) in an international conference	198	80%	50	20%
8.	I have presented paper(s) in an national conference	208	84%	40	16%
9.	I have attended national conferences	161	65%	87	35%
10.	I have attended international conference in the last three years	178	72%	70	28%
%		1814	73%	666	27%
Mean (\bar{X})		2.9585			
SD (σ)		0.6660			

Source: Fieldwork, 2022

Table 1 indicates the opinion of respondents on research engagements by lecturers. The total responses indicated shows a mean=2.95, SD=0.66 indicating that all the suggested responses were accepted as research activities engaged by lecturers. Item 1 indicated that 59% of the respondents revealed that they have authored a book(s) while 41% disagreed with the statement. Item 2 indicated that 60% of the respondents revealed that they have co-authored a book(s) while 40% disagreed with the opinion. Item 3 indicated that 71% of the respondents indicated that they have contributed chapters in book of readings while 29% of the respondents disagreed with the opinion. Item 4 indicated that 81% of the respondents revealed that their research work has been published in an international journal while 19% disagreed with the opinion. Item 5 indicated that 82% of the respondents revealed that their research work has been published in a local journal while 18% of the respondents disagreed

with the opinion. Item 6 indicated that 79% of the respondents revealed that they have presented seminar papers while 21% of the respondents disagreed with the opinion. Item 7 indicated that 80% of the respondents agreed that they have presented papers in international conference(s) while 20% of the respondents disagreed with the opinion. Item 8 indicated that 84% of the respondents revealed that they have presented paper(s) in a national conference(s) while 16% of the respondents disagreed with the opinion. Item 9 indicated that 65% of the respondents revealed that, they have attended international conferences while 35% of the respondents disagreed with the opinion. Item 10 also indicated that 72% of the respondents indicated that, they have attended national conferences while 28% of the respondents disagreed with the opinion.

RQ₂:What is the impact of extrinsic motivational strategies on research productivity of lecturers in public Universities of North-west Nigeria?

Research Question two was answered and presented in table 2 below;

Table 2: Impact of Extrinsic Motivation on research productivity of Lecturers of public Universities in north-west Nigeria

S/N	Item statements	Agreed Freq.	(%)	Disagreed Freq.	(%)
1.	I conduct more research work because I want to be promoted	171	69%	77	31%
2.	I conduct more research because of monetary incentives	109	44%	139	56%
3.	I conduct more research for the purpose of laying the foundation of obtaining awards such as excellence award, talent award to professional award and others recognition	155	63%	93	37%
4.	social recognition is a significant factor that motivate me to conduct more research	147	59%	101	41%
5.	Staff appraisal motivate me to conduct more research	159	64%	89	36%
6.	The need for administrative position <u>motivate</u> me to conduct more research	131	53%	117	47%
7.	Departmental research support motivates me to conduct research.	153	62%	95	38%
8.	Funding opportunity motivate me for higher research productivity	184	74%	64	26%
9.	Tenure placement motivates me to conduct more research.	153	62%	95	38%
10.	A positive working environment encourage me to become more productive in my research activities	200	81%	48	19%
	%	1562	63%	918	37%
	Mean (\bar{X})	2.6762			
	SD (σ)	0.5579			

Source: Fieldwork, 2022

Table 2 indicated the opinions of respondents on extrinsic motivation of lecturers. The responses revealed a total mean=2.67, SD=0.55 indicating that all the suggested responses were accepted which shows that extrinsic motivation has a positive impact on research productivity of lecturers. Item 1 indicated that 69% of the respondents agreed that they conduct more research because they want to be promoted while 31% of the respondents disagreed with this opinion. Item 2 indicated that 44% of the respondents agreed that they conduct more research because of monetary incentives while 56% of the respondents disagreed with this view. Item 3 indicated that 63% of the respondents revealed that they conduct more research for the purpose of laying foundation for obtaining awards while 37% of the respondents disagreed with the opinion. Item 4 indicated that 59% of the respondents agreed that social recognition is a significant factor that motivates them to conduct more research while 41% of the respondents disagreed with the opinion. Item 5 revealed that 64% of the respondents agreed that staff appraisal motivate them to conduct more research while 46% of the respondents disagree with the opinion. Item 6 revealed that 53% of the respondents agreed that the need for administrative position of responsibility motivates them to do more research while 47% of the respondents disagreed with the opinion. Item 7 revealed that 62% of the respondents agreed that Departmental research support motivate them to do more research while 38% of the respondents disagreed with the opinion. Item 8 indicated that 74% of the respondents revealed that funding opportunities motivates them for higher research productivity while 26% of the respondents disagreed with the statement. Item 9 indicated that 62% of the respondents agreed that tenure placement motivates them to conduct more research while 38% of the respondents disagreed with the opinion. Item 10 indicated that 81% of the respondents revealed that a positive working environment encourages them to become more productive in their research activities while 19% of the respondents disagreed with the opinion.

RQ₃: What is the impact of intrinsic motivational strategies on research productivity of lecturers in public Universities of north-west Nigeria?

The research Question three was answered and presented in table 3below

Table 3: Relationship between Intrinsic Motivation and research productivity of Lecturers in public Universities of north-west Nigeria

S/N	Item statements	Agreed Freq.	(%)	Disagreed Freq.	(%)
1.	I invest a lot of time to do research because of peer respect and admiration due to my high research output.	220	89%	28	11%
2.	I enjoy the respect and admiration from students and this motivate me to conduct more research.	222	90%	26	10%
3.	I enjoy doing research because of sense of achievement from publications.	224	90%	24	10%
4.	I conduct a lot of research work in order to achieve peer recognition.	190	77%	58	23%
5.	I engage in research in other to build my competence to overcome challenges.	207	84%	41	16%
6.	Becoming current and up to date in my area of specialization motivates my research productivity	206	83%	42	17%
7.	My mentor is my role model and his guidance and encouragement motivate me to do more research	189	76%	59	24%
8.	My qualification influence the quality and quantity of my research output	191	77%	57	23%
9.	Challenging work assignment enhances my skills and competence to produce more research work.	194	78%	54	22%
10.	Supervision of postgraduate projects motivates me to do more research.	191	77%	57	23%
%		2034	82%	446	18%
	Mean (\bar{X})	3.0669			
	SD (σ)	0.5220			

Source: Fieldwork 2022

Table 3 indicates the opinions of respondents on intrinsic motivation of lecturers. The responses revealed a total mean=3.06, SD=0.52 indicating that all the suggested responses were accepted which shows that intrinsic motivation has a positive influence on research productivity of lecturers. Item 1 indicated that 89% of the respondents revealed that peer respect and admiration motivates them for higher research productivity while 11% of the respondents disagreed with the opinion. Item 2 indicated that 90% of the respondents revealed that the respect and admiration they enjoy from students motivates them to conduct more research while 10% of the respondents disagreed with this opinion. Item 3 indicated that 90% of the respondents indicated that they enjoy research because of sense of achievement from publications while 10% of the respondents disagreed with the opinion. Item 4 indicated that 77% of the respondents revealed that they conduct more research work in order to achieve peer recognition while 27% of the participants disagreed with the opinion. Item 5 indicated that 84% of the respondents revealed that they conduct research in order to build their confidence to overcome challenges while 16% of the respondents disagreed with the opinion. Item 6 revealed that 83% of the respondents revealed that becoming current and up to date in their area of specialization motivates their research productivity while 17% of the respondents disagreed with the opinion. Item 7 indicated that 76% of the respondents agreed that their mentor guides and encouraged them to do more research work while 24% of the respondents disagreed with the statement. Item 8 indicated that 77% of the respondents revealed that their qualifications influenced their research productivity while 23% of the respondents disagreed with this opinion. Item 9 indicated that 78% of the respondents revealed that challenging work assignment enhances their skills and competence to produce more research work while 22% of the respondents disagreed with the opinion. Item 10 also indicated that 77% of the respondents revealed that supervision of postgraduate projects motivates them to do more research while 23% of the respondents disagreed with the opinion.

RQ₄: What is the impact of job satisfaction on research productivity of lecturers in Federal Universities in North-west zone, Nigeria?

Table 4: Impact of job satisfaction on research productivity of lecturers in public Universities of North-west zone, Nigeria.

S/N	Item statements	Agreed Freq.	(%)	Disagreed Freq.	(%)
1.	Feeling valued by the management boost my research productive.	147	59%	101	41%
2.	Implementing policies that reduce administrative burdens and promote collaboration among staff enhances my research productivity.	224	90%	24	10%
3.	Adequate research resources enhances my research productivity	231	93%	17	7%
4.	Satisfaction drives from the job motivate me to invest more time and effort pursuing research goals.	161	65%	87	35%
5.	Fair and competitive salary and incentives makes my job more interesting and indirectly boost my research productivity.	183	74%	65	26%
6.	Equity and fairness in administration of financial and non-financial reward by management enhances my research productivity.	187	75%	61	25%
7.	The enabling environment I enjoy enhances my innovative thinking, leading to high research productivity.	178	72%	70	28%
8.	Satisfaction drives from the job enhance my long-term commitment to the profession and institution, contributing to high research productivity.	179	72%	69	28%
9.	Availability of professional development and research funding opportunities boost my research productivity.	212	85%	36	15%
10.	Healthy work-life balance increases my research productivity	180	73%	68	27%
%		1882	76%	598	24%
Mean (\bar{X})		2.9677			
SD (σ)		0.4807			

Source: Fieldwork, 2022

Table 4 indicated the opinions of respondents on impact of job satisfaction. The responses revealed a total mean=2.95, SD=0.66 indicating that all the suggested responses were accepted which indicated that job satisfaction has an influence on research productivity of lecturers. Item 1 indicated that 85% of the respondents agreed that Availability of professional development and research funding opportunities boost their research productivity while 15% of the respondents disagreed with the opinion. Item 2 indicated that 90% of the respondents agreed that Implementing policies that reduce administrative burdens and promote collaboration among staff enhances their research productivity while 10% of the respondents disagreed with the opinion. Item 3 indicated that 93% of the respondents agreed that adequate research resources enhance their research productivity while 7% of the respondents disagreed with this opinion. Item 4 indicated that 65% of the respondents agreed that Satisfaction drives from the job motivate them to invest more time and effort pursuing research goals while 35% of the respondents disagree with the opinion. Item 5 indicated that 74% of the respondents agreed that fair and competitive salary and incentives makes the job more interesting and indirectly boost their research productivity while 26% of the respondents disagreed with the opinion. Item 6 indicated that 75% of the respondents agreed that equity and fairness in administration of financial and non-financial reward by management enhances my research productivity while 25% of the respondents disagreed with the opinion. Item 7 indicated that 72% of the respondents agreed that the enabling environment they enjoy enhances their innovative thinking, leading to high research productivity while 28% of the respondents disagreed with the opinion. Item 8 indicated that 72% of the respondents indicated that satisfaction drives from the job enhance my long-term commitment to the profession and institution, contributing to high research productivity while 28% of the respondents disagreed with the opinion. Item 9 indicated that 59% of the respondents agreed that feeling valued by the management boost their research productivity while 41% disagreed with the opinion. Item 10 indicated that 73% of the respondents agreed that healthy work-life balance enhances their research productivity while 27% of the respondents disagreed with the opinion.

Discussion of Findings

The first finding of the study shows that university lecturers engage in diverse research tasks such as authorship of book (s) and book chapter (s), journal publication, paper presentation during conference and seminars, conference and workshop attendance. This finding is in support of the findings of which indicated that lecturers attend manpower development programmes such as conferences, seminars and workshops in order to enhance their competence and productivity.

The second finding of this study revealed that, extrinsic motivation has a positive impact on research productivity. This means when lecturers are supported by the University management it can boost their morale to become more productive in terms of research. This finding is in agreement with the findings of Zhang (2014) whose findings revealed that, there was significant correlation between the extrinsic factors and research productivity of academic staff. His finding shows that, extrinsic factors such as: promotion, monetary reward, recognition and respect were considered as the main research motivators by most participants especially lower level academics. This research finding also confirmed the findings of Muogbo (2013) which revealed that, extrinsic motivation given to workers in an organization has a significant influence on the workers' performance, and also increase in motivational tools was also found to have a significant effect on employee performance.

The third finding of the study indicated that intrinsic motivation has an influence on lecturers' research productivity. This is because most of the participants indicated that, they are doing more research out of interest and in order to fulfill certain individual desire such as professional self-development, qualification, tenure placement, encouragement from mentor who serves as their role model while others are motivated by challenging work assignments and peer recognition. This finding support the findings of Ozonna (2013) who found that, when it comes to bringing out the best performance out of employees, growth opportunities, challenges, recognition and non-monetary rewards are more effective motivators than money. This finding also confirmed the findings of Migosi (2011) who investigated the factors motivating business academics to undertake research in a Kenyan university, among 14 factors examined, self-motivation (intrinsic) of academics, research content knowledge, research skills gained and early orientation to research were found to have the greatest influence on research productivity.

Fourth finding indicated that Job satisfaction has a positive impact on research productivity of lecturers in public universities in North-west zone, Nigeria. This means that satisfied lecturers are more likely to be deeply engaged in their research, show strong commitment and dedicate extra time and effort to their research projects leading to optimum research productivity. This finding also support the findings of Lertputtarak (2008) which revealed that, a positive atmosphere influence lecturers to perform research tasks. It is also in agreement with the findings of Christopher (2014) whose findings indicated that induction service, promotion based on merit, delegation of administrative work, good welfare programmes, guidance and counseling services are some of the leading factors influencing job satisfaction.

Implications for University Administrators and Policy Makers

The findings of this paper hold important implications for university administrators and policymakers. This is due to the fact that, recognizing the role of motivation and job satisfaction in enhancing research productivity can inform the development of targeted strategies and policies to create a supportive and motivating academic environment. Thus, it is important to note that the motivated worker does his job better and likes it more than those who are not so motivated. Therefore, both intrinsic and extrinsic motivators are priceless tools to motivate lecturers' to become satisfied with the job and more research productive. Also, the multifaceted nature of these variables necessitates a tailored approach to motivation, taking into account individual preferences and organizational dynamics.

IV. CONCLUSION

The quest for knowledge and advancement thrives on the motivation and satisfaction of University lecturers. Their intrinsic drive, fuelled by a conducive work environment and supportive institutional practices, ultimately translates into impactful research that translates into innovative solutions that shapes the future. Therefore, by understanding the complex interplay between motivation, job satisfaction, and research productivity, Universities can cultivate a thriving academic ecosystem that propels both individual fulfillment and collective scholarly progress.

Recommendations

1. Adequate training and development opportunities should be made available to enable lectures participation and contribution in diverse research areas for optimum productivity.
2. Extrinsic motivation has a strong influence on research productivity of Lecturers in public universities in North-west Nigeria.
3. Lecturers' research productivity will continue to improve significantly when intrinsic motivation opportunities exist to satisfy their needs and aspirations in public Universities.

4. University management should exercise equity and fairness in administration of financial and non-financial motivation strategies because, equity and fairness is at the Centre of employee job satisfaction, motivation and increased productivity.

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