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State Universities and Colleges Research Publication Performance of Based on Scopus Database: Basis for Research Publication Improvement

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ABSTRACT
The study determines the research publication performance of State Universities and Colleges based on Scopus Database. In particular, the Nueva Ecija University of Science and Technology were chosen to be the model university of this study. The Elsevier Scopus database was used to retrieve the total papers, citations, and h-index of each university. These data were then analyzed during the course of the previous years as well as for historical scientific accomplishment. Results shows that a total of 72 documents are affiliated with the university and 63 authors are found in the Scopus database. In addition, the university published to a total of 43 journals indexed in Scopus. Aggressive research publication must be taken into consideration to increase the documents in Scopus for future use.

Keywords: Nueva Ecija University of Science and Technology, Research Publication, Scopus Database

INTRODUCTION

Research is one of the pillars of education and to measure the research publication performance is to come up with publication. Over the last few years, increasing focus has been placed on assessing the scientific output or research performance of Academic staff and students in higher education institutions. Bibliometric parameters, such as the number of papers published by a program and the number of citations generated, are typically used in this evaluation (Lozano, et.al, 2015; Guan, et,al., 2016; Kamdem, et.al., 2016).

Over the course of the past two decades, national research assessments, international league tables, and shifting patterns of government research funding have prompted universities to place a greater emphasis on both the quality and quantity of their research and to anticipate that a greater number of their academics should be engaged in research. Along with this, there has been a boom in the number of studies that investigate various facets of the overall character of research. It is possible to identify many patterns. To begin, there has been a growing emphasis on how research productivity should be developed, which has led to an increase in the number of studies that have been conducted on the elements that contribute to research productivity both within academic fields and between countries (e.g. Serenko and Bontis 2004; Grapin et al. 2013). The second point, which is connected to the first, is that there has been an increased focus on the contribution that PhD students make to the overall research productivity (Boud and Lee 2009).

There has been an increase in the emphasis placed on a broader view of research as something that encompasses more than just the act of publication. This view considers the researcher role, the identification of researchers, research collaboration, research management, and the contribution of undergraduates to research (e.g. Brew and Lucas 2009; Kyvik 2013; Vermunt 2005). A distinct and hitherto separate body of literature has developed in consideration of what research is believed to be. this brings us to our fourth point. This work has investigated the conceptions of research held by senior researchers, undergraduates, and doctorate students, in addition to their supervisors, and has linked such conceptions to concepts of teaching (for example, Akerlind 2008; Brew 2001; Prosser et al. 2008).

Several studies have been conducted to investigate the elements that play a role in the amount of work that researchers produce. Potential factors have been proposed, which has resulted in an increase in the number of multivariate and sophisticated statistical analyses due to the complexity of the variation that can be explained by any one factor.

1. demographic variables including gender, family size and age of children (e.g. Fox 2005; Stack 2004), overseas trained (e.g. Kim et al. 2011);
2. academic capabilities and confidence, and self-efficacy (e.g. Quimbo and Sulabo 2014); • choice of topic (Fisher 2005); and • varioius other factors. These factors include:
3. institutional features (type and size of institution, departmental climate, funding, laboratory size, etc.; Dever and Morris (e.g. Lee and Bozeman 2005).

These analyses are hampered by the difficulties of determining how to measure research production across a variety of institutions and fields of study. In the research that has been done, a wide variety of methods for

gathering data have been documented. Some of these methods include the self-reporting of academics and the use of published statistics. Other methods include the use of various types of measures, such as publication counts over the lifetime of the researcher or during a specific period, the utilization of citations, the types of publications counted, how dual authorship is handled, and so on (Brew and Boud 2009). After collecting the data, there are a number of questions that need to be answered about how to interpret it. When comparing findings from different fields of study or from different nations, this presents a particularly difficult challenge because the publication processes of different fields of study and countries vary (see, for example, Padilla-Gonzalez et al. 2011).

Within universities, there are implicit and explicit messages about research, teaching, administration, and community service; what academics should pursue; and how they should position themselves as academics. While institutional and demographic factors as well as social structures in which academics operate provide a context for the development of research, there are also social structures that provide a context for the development of research. These might be confusing and even seem to contradict one another at times. Our contention is that the level of research output an individual possesses is directly proportional to the amount of effort they put into understanding their surroundings. The meanings that academics attach to research (as well as teaching, administration, and community service) vary depending on how they react to the different circumstances in which they find themselves. Their reactions are also dependent on the meanings that these contexts make feasible, as well as the manner in which they respond, which in turn determines whether they are positioned as researchers or teachers. We argue that there are some perspectives on research that are more likely to lead to high levels of research productivity than others; that academics' conceptions of the environment they are in, of their own goals and capabilities, and what they understand research to be are central to the research productivity of individuals and, by extension, of institutions; that academics' conceptions of the environment they are in are more likely to lead to high levels of research productivity than other perspectives on research; that academics' conceptions of what research is are more On the other hand, we have been unable to locate any studies that investigate the connection between high levels of research production and self-identification as a researcher on the one hand, and the way that academics think about and view research on the other.

Many databases have been utilized for bibliometric analysis, but due to their multidisciplinary nature, Scopus and Web of Science have been at the forefront. The databases are well-accepted by the scientific community as effective tools for evaluating and contrasting the performance of researchers, institutions, and countries among others (Kamdem, et.al, 2016, Di'az-faes, et.al., 2015). Despite the fact that a comparison of the two databases revealed no obvious differences, the study of Bakkalbasi, et.al. (2006) showed that they differ in terms of their scope and the number of documents they contain.

The Nueva Ecija University of Science and Technology is a State University located in Nueva Ecija. At the beginning of its operation prioritized young Filipinos who were taught fundamental telegraphy and carpentry techniques at the Wright Institute in San Isidro, Nueva Ecija, where the Nueva Ecija University of Science and Technology (NEUST) first opened its doors in June 1908. The general secondary school was moved to Cabanatuan City in SY 1927–1928 throughout the duration of the aforementioned vocational course. Woodworking was added as a practical course to the existing secondary curriculum that had been inherited from the Wright Institute, and the school continued to run in San Isidro as Nueva Ecija Trade School (NETS) on June 9, 1929.

The trade school was moved to Cabanatuan City on June 7, 1931, to accommodate the province's growing need for vocational education. Enrollment rose, but the program was suspended in December 1941 when the Second World War in the Pacific broke out. The trade school restarted on September 6, 1945, right after the war. There was a rehabilitation program. The trade school kept up with its goal of helping students from Nueva Ecija and the surrounding regions with their vocational and labor demands. On June 8, 1948, the School allowed female students and a dressmaking course was launched. Courses in cosmetology and food trades were added a few years later.

By virtue of Republic Act No. 845, the NETS was changed to the Central Luzon School of Arts and Trades (CLSAT) on May 8, 1953. A series of developments continued until the CLSAT was transformed into the Central Luzon Polytechnic College (CLPC) by virtue of Republic Act No. 3998, which was signed on June 18, 1964 by then President Diosdado Macapagal. CLSAT was recognized as a center of manpower/vocational training for both youth and adults not only in the province but also in the entire Region III.

In accordance with a Republic Act, the CLPC was transformed into the Nueva Ecija University of Science and Technology 34 years later, under the direction of President Gemiliano C. Calling. No 8612. Speaker Jose de Venecia approved the legislation transforming CLPC into NEUST on February 19, 1998. On February 24, 1998, it was sent to President Fidel V. Ramos, and on March 27, 1998, it was no longer in effect. As a result, the university makes sure to satisfy the needs of the business, industry, services, and other sectors as well as the local, regional, and national development for high-caliber professionals and highly competent middle-level people.

When Dr. Calling passed away on July 5, 2006, his tenure as the first president of the university came to an end.

Dr. Hilario C. Ortiz assumed the reins of power as Acting President before being properly sworn in on August 5, 2007 as the Second University President. Attorney, dated August 4, 2011, Dr. Hilario C. Ortiz was once more appointed to a second four-year term as university president. On February 10, 2016, Dr. Feliciana P. Jacoba was chosen to serve as the third president of the university. As NEUST's first female president, Dr. Jacoba has already made her impact on the university's history. (NEUST Website)

It is evident that there is a falls short in terms of research productivity since it does not place sufficient attention on the influence that research production has on the quality of education or the part that research plays in the solution of societal issues. The evaluation of the research performance and productivity of academic staff members and students in institutions of higher education using bibliometric characteristics is the primary objective of this study. The research also sheds light on the elements that contribute to research productivity as well as the challenges associated with accurately quantifying research production across a variety of academic institutions and subject areas. However, the study does not discuss the influence of research productivity on the standard of education, the relationship that exists between research and the classroom, or the function that research plays in the process of finding solutions to societal issues.

METHODS

The scientific productivity of the university was assessed by looking at their total number of published documents as well as the number published from the beginning of the university's operation up to December 2022. The Elsevier Scopus database was used to retrieve citable documents like articles and conference proceedings produced by each of the affiliated in the university. On December 31, 2022, a database search was conducted.

RESULTS AND DISCUSSIONS

The following are the details of the University as per Scopus website.

The NEUST has the following affiliation details from Scopus Database:

Name: Nueva Ecija University of Science and Technology (NEUST)

Address: Gen. Tinio Street., Cabanatuan, Central Luzon, Philippines

Affiliation ID: 60268234

Other name formats: Nueva Ecija University Of Science And Technology, Nueva Ecija University Of Science And Technology (neust), Nueva Ecija University Of Science And Technology San Isidro Campus, Nueva Ecija University Of Science And Technology-mgt,Nueva Ecija University Of Science And Technology - San Isidro Campus, I.t. Instructor At Nueva Ecija University Of Science And Technology (neust), Faculty Of Mathematics And Statistics In The Graduate School Of Nueva Ecija University Of Science And Technology, Faculty Of College Of Information And Communications Technology At Nueva Ecija University Of Science And Technology, College Instructor At Nueva Ecija University Of Science And Technology

The total documents of the University are 72 and the total authors are 63. Figure 1 shows the screen capture from Scopus database.

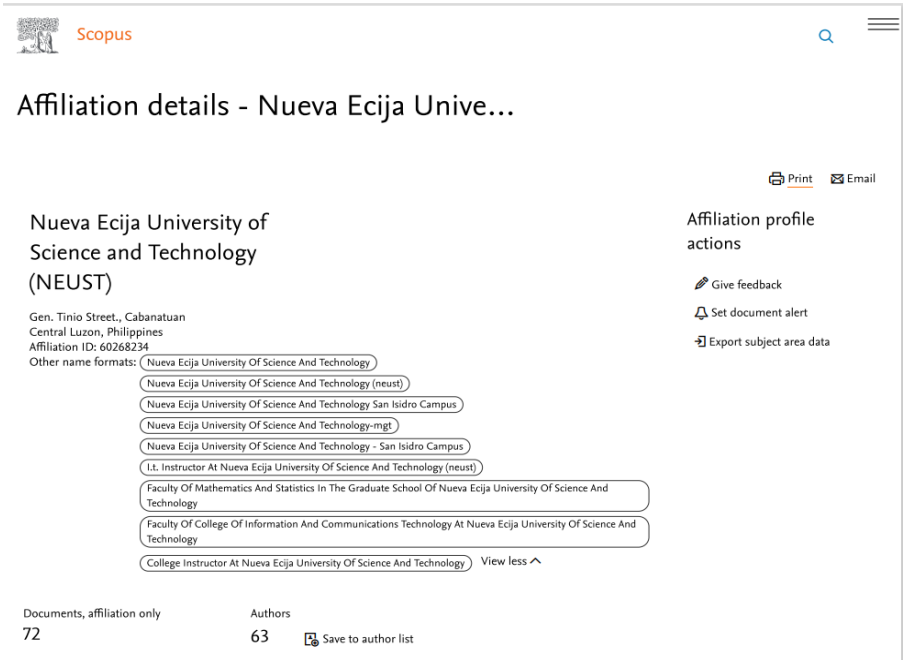

Figure 1: Screen capture of NEUST from the Scopus website

A. NEUST Document by Subject Area

Table 1: Number of Documents in Scopus by Subject Area

Subject Area	Number of Documents in Scopus
Social Sciences	36
Engineering	23
Computer Science	14
Business, Management and Accounting	13
Medicine	10
Environmental Science	8
Nursing	6
Biochemistry, Genetics and Molecular Biology	5
Agricultural and Biological Sciences	4
Arts and Humanities	4
Energy	4
Chemistry	3
Mathematics	3
Psychology	3
Chemical Engineering	2
Decision Sciences	2
Earth and Planetary Sciences	2
Neuroscience	2
Economics, Econometrics and Finance	1
Immunology and Microbiology	1
Materials Science	1

Table 1 shows that the social sciences subject area has the highest number of Scopus documents with a total of 36. It is followed by Engineering with a total of 23 documents. Economics, Econometrics and Finance, Immunology and Microbiology and Materials Science has the lowest number of Scopus document a total of 1 respectively.

B. NEUST Collaborating Affiliations

Table 2: NEUST Collaborating Institutions

Affiliation Name	Documents
Wesleyan University Philippines	3
Guangzhou Huashang College	3
Lu'an Vocational and Technical College	3
University of Chinese Academy of Sciences	3
Central Luzon State University	3
Taishan University	3
Chongqing Creation Vocational College	2
M.V. Gallego Foundation Colleges, Inc.	2
Shenyang University of Chemical Technology	2
Northeastern University at Qinhuangdao	2
San Beda University	2
Southeast Bangkok College	1
Southern Institute of Technology	1
Luzhou Vocational and Technical College	1
City Engineer's Office	1
City Government of Cabanatuan	1
University of Perpetual Help Sytem Dalta	1
Faculty of Mathematics and Statistics in the Graduate School	1

of Wesleyan University Philippines	
Sacred Heart College of Guimba, Inc.	1
College of Information and Communications Technology and Graduate School in the same University	1
Chongqing Creation Vocational College	1
General View Think-tank	1
Universitas Mohammad Husni Thamrin	1
Office of Academic Affairs	1
Centre of Rajiv Gandhi Institute of Petroleum Technology	1
Chongqing Yongchuan Center for Disease Control and Prevention	1
ZR Holdings Limited	1
Thapar Institute of Engineering & Technology	1
Shandong University of Science and Technology	1
Ehime University	1
Zagazig University	1
Kyungil University	1
East China University of Science and Technology	1
Jimei University	1
Peking University	1
The Education University of Hong Kong	1
George Mason University	1
Wenzhou University	1
Shenyang University of Technology	1
Chongqing University	1
Yanbu Industrial College	1
Guangzhou University	1
King Khalid University	1
University of Rajasthan	1
Universitas Tanjungpura	1
L-Università ta' Malta	1
Ton-Duc-Thang University	1
Universitas Negeri Semarang	1
Center for Marine Environmental Studies, Ehime University	1
West Visayas State University	1
Covenant University	1
Islamic Azad University, Parsabad Moghan Branch	1
Universitas Negeri Jakarta	1
Prince Sattam Bin Abdulaziz University	1
Angeles University Foundation	1
Bulacan State University	1
Universitas Indraprasta PGRI	1
Al-Mustaqbal University College	1
Manipal University Jaipur	1
Saveetha Dental College And Hospitals	1
Saveetha Institute of Medical and Technical Sciences	1
Duy Tan University	1
GLA University, Mathura	1
Krirk University	1
LM Thapar School of Management	1

Shenyang Institute of Technology	1
Qilu Normal University	1
Faculty of Science	1

A total of 68 collaborating institutions which is composed of other university, government agency and departments. Interestingly there are more than 10 foreign collaborating institutions that became advantage of the university.

C. NEUST Document by Source

Table 4: Document by Source

Journal Name	Documents
International Journal Of Scientific And Technology Research	11
International Journal Of Public Health Science	5
ACM International Conference Proceeding Series	4
European Journal Of Educational Research	3
International Journal Of Applied Engineering And Technology London	3
Asia Pacific Journal Of Public Administration	2
Computational Intelligence And Neuroscience	2
Frontiers In Psychology	2
Fuel	2
International Journal Of Engineering Trends And Technology	2
Journal Of Bioethical Inquiry	2
Mobile Information Systems	2
Sage Open	2
2020 IEEE 12th International Conference On Humanoid Nanotechnology Information Technology Communication And Control Environment And Management Hnicem 2020	1
Advances In Materials Science And Engineering	1
Applied Thermal Engineering	1
Arabian Journal Of Geosciences	1
Asian Efl Journal	1
Asian Journal Of Agriculture And Rural Development	1
Asian Journal Of Women S Studies	1
Belitung Nursing Journal	1
Chemosphere	1
Cogent Social Sciences	1
Education Research International	1
Environment Development And Sustainability	1
Frontiers In Microbiology	1
Future Generation Computer Systems	1
Genetika	1
International Journal Of Disaster Risk Science	1
International Journal Of Food Science	1
International Journal Of Game Based Learning	1
International Journal Of Recent Technology And Engineering	1
Iop Conference Series Earth And Environmental Science	1
Journal Of Applied Biology And Biotechnology	1
Kritike	1
Lecture Notes In Electrical Engineering	1
Lecture Notes In Networks And Systems	1
Lecture Notes On Data Engineering And Communications Technologies	1
Pakistan Journal Of Medical And Health Sciences	1
Proceedings 2022 International Conference On Information System Computing	1

And Educational Technology Iciscet 2022	
Proceedings Of 2019 The 9th International Workshop On Computer Science And Engineering Wcse 2019	1
Public Organization Review	1
Res Militaris	1

The faculty members of NEUST have published their papers to 43 international journals. Surprisingly, there are also published materials from the university in conference proceedings.

SUMMARY AND CONCLUSIONS

The evaluation of the research publication performance of Nueva Ecija University of Science and Technology in the Scopus database encompasses three parts, including the number of documents by subject areas, collaborating institutions, and documents by source. Firstly, among the subject areas such as social sciences followed by engineering, a large number of documents were produced while the rest had the lowest number; however, it explicitly shows that the total number of published documents needs progress. Secondly, the collaborating institutions, which are composed of local and other foreign universities, government agencies, and departments, have a great advantage in relation to the foregoing results. Thirdly, the faculty members of NEUST have published their papers in various international journals, including the published materials from the university in conference proceedings, which appear to have an impressive potential for future research publication expansion. Finally, based on the findings of the study, the researcher has concluded that, as of December 31, 2022, the research publication performance of NEUST requires improvement. However, aggressive research publication is required to increase the number of documents in Scopus for future use.

RECOMMENDATIONS

To increase the number of published documents by various subject areas, collaborative institutions, and reputable journals, the NEUST should formulate a proposed plan of action to strengthen and further improve research publication. The research program should not be limited to high-indexed journals, but should also include other reputable journals. The university must not center its efforts on Scopus and/or Web of Science publication because the other journal could serve as a training ground for future publication in high-indexed journals like Scopus. The administration should consider not only the duties and responsibilities of the faculty but also the financial consequences for the researcher, particularly the beginner, and other faculty who attempt to perform, produce, and publish papers. "Publish at your own risk" is one of the reasons that hinder the enthusiasts' efforts to participate and contribute to the university. In addition, choosing collaborating partners from high-performing institutions can improve institutional research performance and attract more participants. Nevertheless, to avoid false, fraudulent, and predatory publications, one must have thorough knowledge of and regard for respectable journals.

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