

## **A Bibliometric Study of Postgraduate Theses and Dissertations in Archeology: with special reference to Postgraduate Institute of Archaeology, Sri Lanka**

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### **Abstract**

This research is based on the study of 139 theses/dissertations accepted by the Postgraduate Institute of Archaeology (PGIAR) from 2000 – 2018, which are available in the Library. The main purpose of this study was to investigate the subject expanses of research in archaeology and related disciplines. The main objectives of this study were to find out the year and language wise distribution, to identify the subject coverage and the postgraduate research trends in the field of archaeology in Sri Lanka in last two decades. This study could be significant for any researcher to know the ongoing research works carried out in Archaeology in Sri Lanka. The study was mainly focused on providing an overview of the most significant results obtained throughout the research. Overall, a lack of stability in the growth could be observed in the past 20 years. More specifically, a downfall could be recorded in the period of 2009-2012. It is indeed essential for any researcher to be aware of the ongoing research works carried out in the field of Archaeology. However, researchers often fail to obtain the relevant resources required in order to keep up to date with the research carried out in Sri Lanka. The result of this study can be used to maintain the quality of the PG research in the Institute and the Sri Lankan context.

**Keywords:** Bibliometric study, Archaeology, Theses/ Dissertations, PGIAR, Sri Lanka.

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Received: 02 December 2021, Accepted revised version : 10 March 2022  
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## **Introduction**

Bibliometrics uses statistical methods to analyze books, articles, and other publications. Bibliometric methods are frequently used in the field of library and information science. In 1970, Thom defined that the Bibliometric is the quantitative treatment of the properties of recorded as bibliometric is the study of the use of documents and pattern of publication in which mathematical and statistical methods have been applied (Fair Thom, 1970). Many research fields use bibliometric methods to explore the impact of their field, a set of researchers and the particular paper or to identify particularly impactful papers within a specific field of research. There are two types of Indicators, Quantitative and Qualitative. In quantitative study studies the geography of a particular source, region, time period, authors or subject. In qualitative studies the quality, such as citation, references etc. Bibliometrics are now used in quantitative research assessment exercises of academic output which is starting to threaten practice-based research. In 1999 Weerasooriya defined the bibliometric study is one of the best method of study in the field of Library and Information Science. It is a systematic study of numerical and organizational aspects of each discipline.

Archaeology can be define as a study of the remains of prehistoric times, knowledge of tools of various man-made cultural materials, knowledge of their products, social politics, education, administration, commerce, customs, philosophies, religions and beliefs. According to the Basnayake (1992) the main function of archeology is to reconstruct the information of ancient human societies with clues such as the remains of ancient ruins and sculptures and also, the study of human activity through the recovery and analysis of material culture. The archaeological record consists of artifacts, architecture, biofacts or ecofacts and cultural landscapes. Archaeology can be considered both a social science and a branch of the humanities.

The Postgraduate Institute of Archaeology (PGIAR) is a regional institution in higher learning in archaeology and its related subjects that will prepare internationally competitive specialists and scholars in the relevant fields. PGIAR believes that knowledge in history, culture, heritage, art and traditional knowledge systems plays a vital role in social and economic development of a society and the formation of a healthy national identity in an era of accelerated globalization of cultures.

PGIAR established in 1986 and has commenced granting postgraduate degrees since 1990. It currently runs five major postgraduate courses on archaeology and related disciplines. The collection of graduate dissertations in the Library of PGIAR was started in 2003. The library's responsibility is to direct the students, researchers, and scholars to the curriculum that can contribute to the development of the country on the path to sustainable development.

This study seeks to evaluate the contribution that postgraduate archaeological research has made to the preservation, maintenance and development of Sri Lanka's cultural heritage in last two decades.

### **Objectives of the Study**

The objectives of the study were,

- To find out the year and language-wise distribution of the theses/dissertations in the field of Archaeology.
- To identify the subject coverage.
- To identify the postgraduate research trends in the field of archaeology.

### **Literature Review**

According to Gumpenberger, Wieland and Gorraiz, (2012) "Bibliometrics is ideal for librarians to develop and provide innovative services for both academic and administrative university staff. In doing so they made sure to actively participate in the development of new strategies and in fostering innovation".

Angammana and Jayatissa (2015) conducted a research study on a bibliometric study of postgraduate theses in library and information science: with special reference to the University of Kelaniya and Colombo Sri Lanka. In this study 70 theses were analyzed, 50 theses submitted for the Master of LIS degree (MLS) of the University of Colombo and 20 theses submitted for the Master of Social Science in LIS (MSSc) of the University of Kelaniya. Based on the results they recommended that librarians should conduct further bibliometric research studies in other disciplines as well.

In 2015, Singh, Jayendra Kumar conducted a research study on the Bibliometric analysis of PhD theses in LIS during 1993-1997 in Indian universities. The study was based on the LIS contribution made by the research scholars in 1993-1997. It says that the growth was not steady during the period of study. The study revealed that the research productivity of the LIS theses was not satisfactory compared to the other subject disciplines. It also mentioned that research funds were a basic requirement to overcome this problem.

In 2016 Sangiri conducted a research study on Bibliometric study of Ph.D theses in zoology of Vidyasagar University. He mentioned that it is very important to know the research works carried out in the past and it will be helpful to them to find out the research gaps in the field research. The present study is based on 234 citations, appended to the 47 PhD theses of Sociology submitted to Devi Ahilya Vishwavidyalaya, Indore for the award of doctoral degree during the period 2000-2006. The main purpose of this study was to investigate the subject areas of research in sociology. To identify the different style manuals used in the theses. To know language-wise, country wise and age-wise distribution of the citations. To study the authorship pattern and forms of literature cited. Identified the frequently cited journals. The study finally concludes that such studies will be helpful to researcher's information needs and serve as feedback to the librarians in the acquisition of useful books and subscribe core journals within the budget.

A research study on a bibliometric analysis of the theses and dissertation on information literacy published in the United States and Taiwan investigated and mapped the trends in information literacy research by applying bibliometric analysis. This research study reveals that theses and dissertations on information literacy in Taiwan was grow rapidly from 1988-2010.

## **Methodology**

This study mainly focuses on the subject coverage and research trends in the field of archaeological research. Individual thesis/dissertation was observed by physically and year wise and subject-wise worksheets have been designed and generated for data collection. Thesis-wise worksheets have been used for the data collection and data analyzed by using MS-Excel worksheets. The

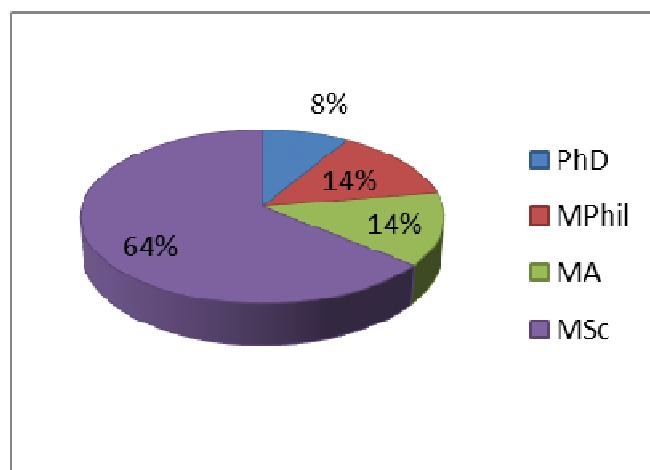
PGIAR has commenced granting postgraduate degrees in 1990. This research study is limited to 139 theses/dissertations accepted by the PGIAR from 2000 -2018, which are available in the Library.

## Results

It is seen that the 139 thesis/dissertations had been submitted to the PGIAR from 2000-2018. During this period, 12 (8%) PhD, both 19 (14%) MPhil and MA and 89 (64%) of MSc thesis/dissertations were submitted. The average number of theses/dissertations submitted per year is 08. The highest number of academic qualifications awarded for the last 18 years was MSc 89 (64%).

**Table 1: Numbers of thesis submitted from 2000-2018**

Academic qualification	Nos. of thesis submitted	%
PhD	12	8%
MPhil	19	14%
MA	19	14%
MSc	89	64%
<b>Total</b>	<b>139</b>	<b>100%</b>



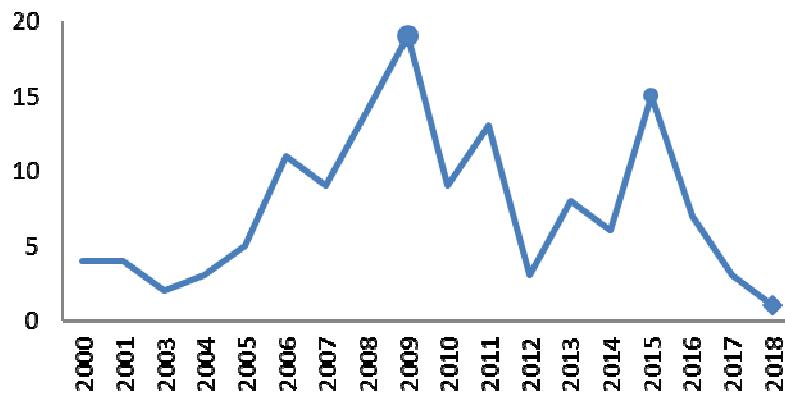
*Figure 1: Numbers of thesis submitted from 2000-2018*

## Year wise distribution

The highest number 13.6% of theses/dissertations submitted were in 2009 while the lowest number (0.7%) of theses/dissertations was submitted in the year 2018. In Table 1 & Figure 2, it is seen that the growth of thesis/dissertation submitted during 2000-2018 are not steady. During the years 2000-2009, the submissions of thesis/dissertation were gradually increased but in 2009-2012 were downfall. And also it can see the rapid downfall of submissions in the period 2015-2018.

*Table 2: Year-wise distribution of Dissertations submitted in 2000-2018*

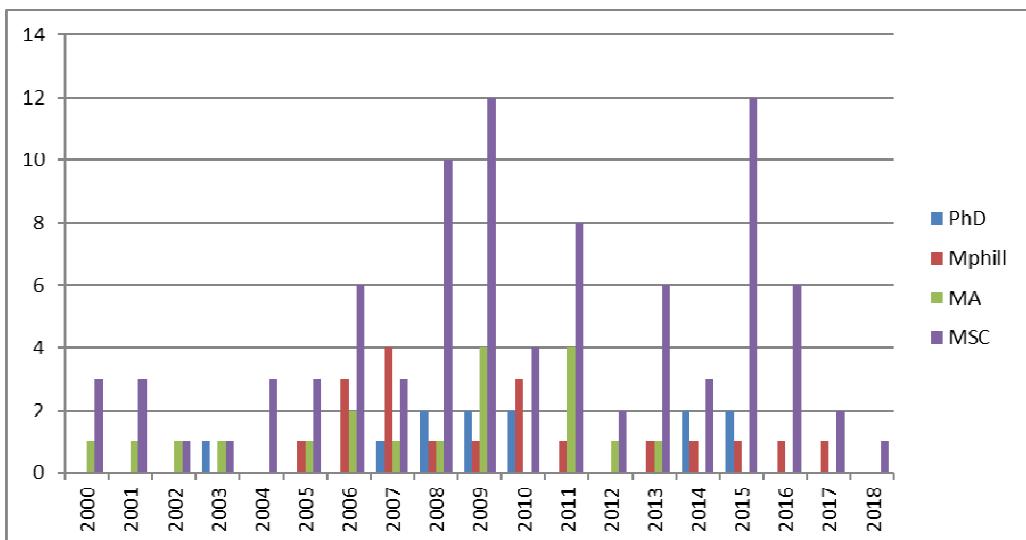
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
PhD	-	-	-	1	-	-	-	1	2	2	2	-	-	-	2	2	-	-	12	
MPhil	-	-	-	-	-	1	3	4	1	1	3	1	-	1	1	1	1	-	19	
MA	1	1	1	1	-	1	2	1	1	4	-	4	1	1	-	-	-	-	19	
MSc	3	3	1	1	3	3	6	3	10	12	4	8	2	6	3	12	6	2	1	89
Total	4	4	2	2	3	4	11	8	14	19	9	13	3	8	4	15	7	3	1	139



*Figure 2: Year-wise distribution of theses/ dissertations submitted from 2000-2018*

The findings revealed that the 89 (64%) Master of Science in Archaeology (MSc) was the highest number of theses/dissertations submitted in the years

2000-2018. This was followed by the MA and MPhil 19 (13.67%) each. Ph.D. was the lowest number of theses/dissertations 12 (8.63%) submitted in the last 18 years. From 2000-2004 there was no submission in MPhil and also, was no submission in MA in 2014-2018.



*Figure 3: Year-wise distribution of Dissertations submitted in 2000-2018*

The findings showed the availability of Ph.D. submitted in 2003, 2007 (one each year), 2008- 2010 (only 6 theses, 2 each in a year) and 2014-2015 (total of 4 theses and 2 each in a year). The reason for the non-availability of Ph.D. thesis could be a result of the fact that Ph.D. programs take about 5 years to complete. The first Ph.D. thesis was submitted to the PGIAR in 2003. In 2004 and 2018, only MSc was submitted. When comparing the 18 years, the findings reveal that 2009, 2015 and 2008 were the most productive years.

### **Language-wise**

This study reveals that 37 (26.6%) theses/dissertations were written in English and 102 (73.4%) were written in the Sinhala language (Native language). It is clear that the highest number of theses/dissertations were submitted in the Sinhala language.

**Table 3: Language wise distribution of theses/dissertations submitted 2000-2018**

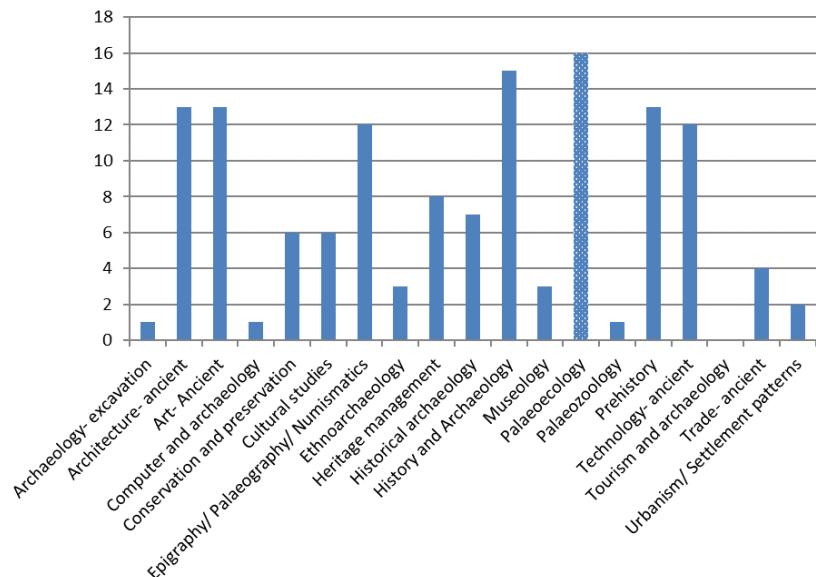
	PhD	MPhil	MA	MSc	Total
English	7	5	6	19	37
Sinhala	5	14	13	70	102

### Subject-wise distribution

The students, it is very important to know the number of theses by subject and the subject coverage of theses submitted because they need to find out the research gap in the field of their interest. It is also important to avoid duplication.

**Table 4: Subject coverage of theses/dissertations submitted 2000-2018**

Subject Cover	PhD	MPhil	MA	MSc	Total
Archaeology- excavation	-	-	-	1	1
Architecture- ancient	3	2	-	8	13
Art- Ancient	3	2	3	5	13
Computer and archaeology	-	-	1	-	1
Conservation and preservation	-	1	1	4	6
Cultural studies	-	1	2	3	6
Epigraphy/ Paleography/ Numismatics	1	-	3	8	12
Ethno archaeology	-	1	-	2	3
Heritage management	-	2	1	5	8
Historical archaeology	-	1	1	5	7
History and Archaeology	-	1	3	11	15
Museology	-	-	-	3	3
Paleoecology/ Environmental archaeology	-	1	1	14	16
Paleozoology	-	1	-	-	1
Prehistory	1	2	-	10	13
Technology- ancient	2	3	1	6	12
Tourism and archaeology	-	-	-	-	0
Trade- ancient	-	1	2	1	4
Urbanism/ Settlement patterns	2	-	-	3	5
<b>Total</b>	<b>12</b>	<b>19</b>	<b>19</b>	<b>89</b>	<b>139</b>



*Figure 4: Subject coverage of theses/dissertations submitted 2000-2018*

The findings revealed that the subject coverage of theses/dissertations spread over 20 major subject areas. This study shows that Paleoenvironmental studies was the most researched area with 16 contributions (11%) during the period 2000-2018.

This was followed in descending order by History and archaeology15 (10%), Architecture- ancient, Art-ancient and Prehistory 13 each (9%). Epigraphy/ Paleography/ Numismatics and Technology- ancient were count 12 each (8.6 %).

The findings show that Ph.D. theses were limited to a few subject areas. Ancient architecture and ancient art were the most researched subject areas. Ancient technology and Urbanism/Settlement patterns were the second-highest researched subject areas. MPhil and MA contributed equally over 20 subject areas. In MSc, Paleoenvironmental studies was the highest researched subject area with 16 (11 %) but no contributions in Ph.D.

According to the findings, there was no contribution to Subject coverage of theses/dissertations on Archaeology and Tourism, artifact conservation, Intangible heritage/ Folklore etc. The results reveal that there was a low

contribution to Heritage management, Computer and archaeology, Excavations.

## Conclusion

*Table 5: Key Bibliometric Dataset for each Academic Report*

Criteria	Type of academic report			
	PhD	M. Phil.	MA	MSc
Total number of Thesis/ Dissertations	12 (8%)	19 (14%)	19 (14%)	89 (64%)
Year of the maximum submission	2009 (13.6%)			
Year of the minimum submission	2018 (0.7%)			
Average number of submissions per year	08			
English medium submission	37 (26.6%)			
Sinhala medium submission	102 (73.4%)			
Research area				
Palaeoecology/Environmental Archaeology	Nil	16 (11%)		
History/Archaeology	Nil	15 (10%)		
Ancient Art, Architecture and Prehistory	03 (2%)	Nil	10 (7%)	
Epigraphy/ Paleography/ Numismatics and Ancient Technology	01(0.7 1%)	Nil	11 (8.5)%	

During the period 2000-2018, a bibliometric study of 139 targeted thesis/dissertations suggests that the archaeological practice has been predominated with M.Sc programme. It seems to have been one of the most academically and professionally demanding programme among other research areas. In the observed period, year-2009 was very productive in the academic context of the PGIAR. Archaeological practice with M. Phil and MA programme was considerably low while this practice was extremely poor with the highest academic programme (PhD), most possibly due to lack of funding for organizing research, appropriate expertise and other reasons. Considerable variation in bibliometric dataset suggests that certain variable

and/or controllable academic/social factors might have associated with the archaeological practice in the PGIAR. Further research is requested for detailed understanding these variations.

### **Acknowledge**

Monica Bulathsinghala, Senior Assistant Librarian, Postgraduate Institute of Archaeology

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