

## **Publications of Walailak University from 2007 to 2014 in ISI, SCOPUS and TCI Databases**

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### **Abstract**

Publications from Walailak University in ISI Web of Science, SCOPUS and Thai-Journal Citation Index (TCI) databases are analyzed. From 2007 to 2014, the number of publication in the ISI database has increased from about 20 to almost 70 research articles reaching the maximum publications in both ISI and TCI databases in 2013. With the total of 489 articles found on SCOPUS, the highest number of publication per staff over 0.25 is also obtained in 2013. The largest contribution in each year belongs to School of science whereas School of allied health science and public health and School of medicine have impressive growths of international publication in recent years. The majority of the published articles are from research collaborations and international collaborations approximately accounted for one third of all international publications. Since the publications have vastly accumulated, the number of citations in the ISI database has substantially raised from 106 times in 2008 to 502 times in 2014.

**Keywords:** Walailak University, publication indicators, SCOPUS, Web of Science, Thai-Journal Citation Index

### **Introduction**

Walailak University (WU), located in Nakhon Si Thammarat in the south of Thailand, is a fully autonomous state university under the supervision of Thailand's Ministry of Education [1]. The university currently has undergraduate students in 11 schools and graduate students in 9 schools. Ranked at 12<sup>th</sup> in 2011 and 10<sup>th</sup> in 2012 for Thai university by the QS World University Rankings Asia [2], the research of the university in the areas of science and technology, management and social sciences and health sciences has continually grown over 17 years of student admissions. In 2014, research grants over 60 million baht from external sources and 10 million baht by internal budget were funded.

To assess the research output, the international publications indexed by Elsevier's SCOPUS and Thomson Reuters' Web of Science (also known as Institute of Scientific Information or ISI) databases are universally regarded as the key performance index. Abstract, keywords, authorship and citation data of each research article are accessible on the internet [3,4]. For academic journals based in Thailand, Thai-Journal Citation Index (TCI) database has covered more than 500 journal titles and 150,000 research articles since 2002 [5].

During 2001 - 2006, 65 international publications from Walailak University in the ISI database were analyzed in [6]. This paper is aimed to further analyze the research contributions from Walailak University in SCOPUS, ISI and TCI databases from 2007 to 2014.

## Materials and methods

International research articles affiliated to Walailak University during 2007 - 2014 were searched on the SCOPUS [3], ISI Web of Science incorporating Science Citation Index, Social Science Citation Index and Art & Humanities Citation Index [3] and TCI websites. The numbers of academic staff from each year were also taken into account. The ISI Web of Science was further used to classify the school affiliation and authorship. The authorship was divided into single author, national and international collaboration. A research article was considered the international collaboration when at least one of co-authors is affiliated to an institution outside Thailand. Finally, the numbers of citations in reference to all published articles by Walailak University in the ISI database until December 2014 were recorded.

## Results and discussion

Overall, 351 research articles affiliated to Walailak University from 2007 to 2014 were found in the ISI database demonstrating a significant growth over the average value of 11 papers per year during the 2001 - 2006 period [5]. The results also indicate a large variety of journals with hundreds of different titles ranging from those with impact factors over 6 (Chemical Communications, Journal of Cosmology and Astroparticle Physics). Classified by years of publication in **Table 1**, international publications were dramatically raised in 2013. Since the SCOPUS database covers a larger number of journal titles than the ISI database, the university members have published more research articles in the SCOPUS database. Taking the increase of academic staff into the account, the ratio of publication per academic staff reached the maximum of 0.163 for ISI and 0.252 for SCOPUS in 2013. For research articles published in either English or Thai language in the TCI database, the number fluctuates during the 2007 - 2014 period with the publication per academic staff exceeding 0.2 only in 2008. No significant growth in TCI publications can be inferred that some authors had published the works in the TCI before raising the standard to international databases. A large drop in number the previous year in 2014 will slightly be improved since some late additions to the TCI database are expected.

**Table 1** Total publications and numbers of publication per academic staff of Walailak University in the ISI Web of Science, SCOPUS and TCI databases according to publication years.

Year	Number of WU Academic Staff	ISI Publications		SCOPUS Publications		TCI Publications	
		Total	Number per Staff	Total	Number per Staff	Total	Number per Staff
2014	443	68	0.153	108	0.244	49	0.111
2013	416	69	0.163	105	0.252	72	0.173
2012	398	39	0.098	58	0.146	42	0.106
2011	359	49	0.136	60	0.167	53	0.148
2010	328	42	0.128	50	0.152	39	0.119
2009	293	32	0.112	39	0.133	52	0.177
2008	280	31	0.111	38	0.136	59	0.211
2007	256	21	0.082	31	0.121	50	0.195
Total		351		489		366	

**Table 2** Publications of Walailak University in the ISI database analyzed according to their authorship and number of citations.

Year	Publications in ISI from Thailand	Publications in ISI from WU Classified by Collaborations			Total Publications	Accumulated Publications since 2001	Total Citations
		Single author	National	International			
2014	7,987	4	48	16	68	419	502
2013	7,821	1	49	19	69	351	380
2012	7,735	0	27	12	39	282	317
2011	7,009	4	23	22	49	243	273
2010	6,610	2	26	14	42	194	216
2009	6,283	1	19	12	32	152	188
2008	5,368	5	15	11	31	120	107
2007	4,471	3	5	13	21	89	106

In **Table 2**, the publications are classified in terms of the authorship. Reflecting the research community at the present time, most publications are from research collaborations with only 20 research articles written by a single author. About 36 % of the collaborated papers are jointly produced by Walailak University members and foreign researchers. With only 2007 as the exception, the numbers of publication from these international collaborations are less than those affiliated solely with Thai institutions. The top 5 nations which co-produce these research articles with Walailak University staff are USA (37 articles), UK (28 articles), Japan (22 articles), Australia (20 articles) and Malaysia (10 articles).

The academic impact of research articles can be quantified by the times of citation by other publications. **Table 2** also shows the substantial rise in citations along with the increase in accumulated numbers of research articles. The top 3 articles with the highest citation are “A neuronal model of Alzheimer’s disease: An insight into the mechanisms of oxidative stress-mediated mitochondrial injury” published in Neuroscience 2008 with 77 citations, “Adsorption kinetic study of lac dyeing on cotton” published in Dyes and Pigments 2008 with 47 citations and “Biochemical and gelling properties of tilapia surimi and protein recovered using an acid alkaline process” published in Food Chemistry 2009 with 37 citations.

Classified by the affiliation in **Figure 1**, School of science has constantly produced the highest number of ISI publications every year. With less than 40 members of academic staff, this brings impressive numbers as high as 1 publication per School of science staff per year in 2013. Interestingly, the rapid growths in recent years belong to School of allied health science and public health and School of medicine. This is related to the emergence of young staff as international researchers in the health science faction. The smallest contribution from the management and social sciences faction is a common trend for international publications in the university. According to the report by National Research Council of Thailand [7], international research articles in management and social sciences constitute only 3.3 - 4.0 % of total publication from Thailand in 2009 - 2013. For the TCI publications in **Figure 2**, the contributions from 11 schools are more balance with expectedly small numbers from 3 new schools. The top 5 schools with the highest accumulation of research articles in the TCI database during 2008 - 2013 are School of agricultural technology (60), nursing (56), science (54), liberal arts (51) and allied health science and public health (48).

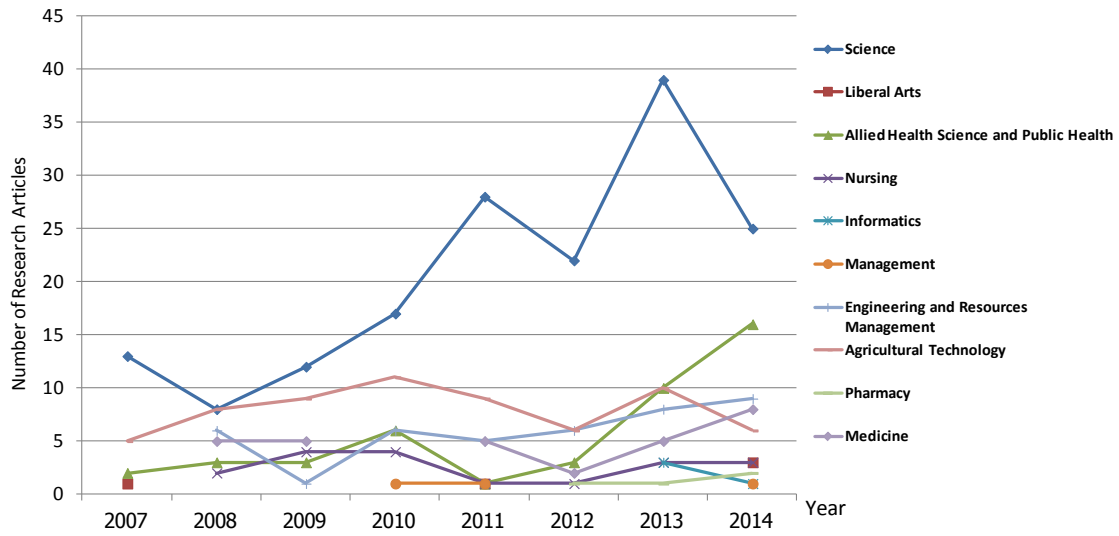


Figure 1 Number of publications in the ISI database classified by school by year during 2007 - 2014.

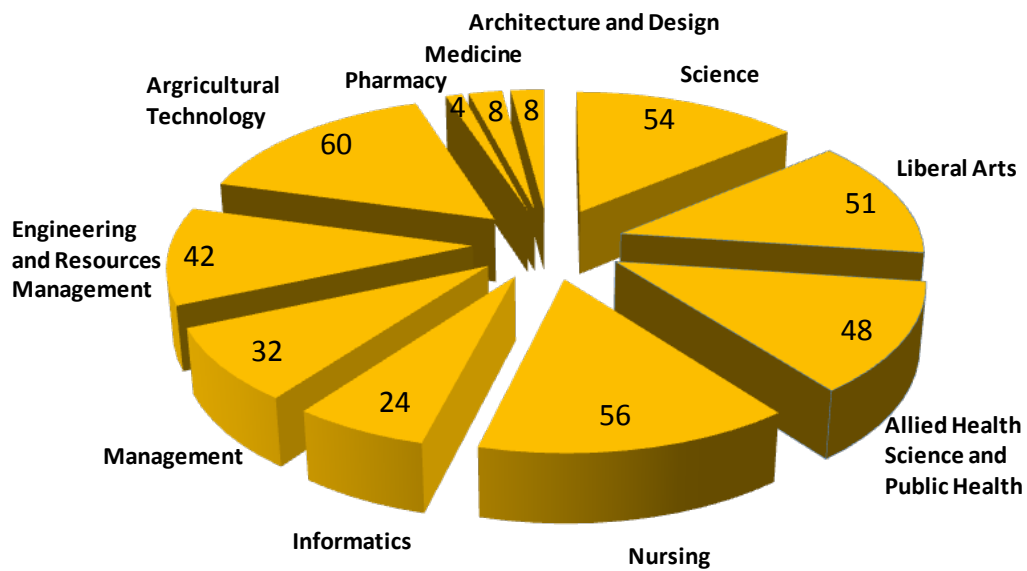


Figure 2 Total publications in the TCI expanded database during 2007 - 2013 classified by school.

### Conclusions

International research articles from Walailak University have increased and reached the maximum 0.252 SCOPUS publication per staff and 0.163 ISI publication per staff in 2013. Most of these publications have multiple authors and about one third of total numbers are international collaborations. The articles include the ones published in the journals with impact factors over 6 and ones with citation as high as 77. School of science has a largest ratio of contribution but recent years have seen significant growths from School of allied health science and public health and School of medicine. For the TCI database, significant contributions are also from School of agricultural technology, School of nursing and School of liberal arts.

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