

Bibliometric Analysis on an Indonesia English Education Department Academic Staffs' Productivities and its Potential for National Accreditation Stance

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ABSTRACT

This study was aimed to analyze the academic staffs' (AcSs) productivities in an English Education Department (EED) at an Indonesia higher education institution (IHEI) in Lombok Island, Indonesia from the lens of Indonesia national accreditation for higher education (BAN-PT). The bibliometric analysis was conducted by collecting data through Google Scholar-based Hazing's Publish or Perish (GSbHPP) application from 2014 to 2021. The participants were nineteen AcSs in an EED-IHEI. The collected data were displayed in tables and Figures, which were further analyzed for description and interpretation. The literature review was conducted to confirm the interpretation of data. The study revealed that numbers of individual publications are unbalanced, as some were very productive and some others needed more motivation, the numbers of individual publication citations were in huge gaps, the EED-IHEI publication average impact factor from 2014 to 2021 was high (IF=3.08) depicting worldwide document usage, the EED-IHEI AcSs' publications grew significantly, especially in the last three years, and the findings quantitatively describe potential for achieving higher score in Indonesia national accreditation. This study recommends the institution to employ beneficially bibliographic analysis to contribute better professional development for the AcSs.

Keywords: Bibliometric, Academic Staffs (AcSs), Publication, Indonesia Higher Education Institution (IHEI), English Education Department (EED).

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INTRODUCTION

Bibliometric refers to the software or application which mathematically and statistically used to analyze both printed and non-printed materials by considering the significant parameters of the materials.^[1,2] This analysis has a strong relation with librarian jobs to manage the literature growth in terms of quality and number.^[3] In more detail, Swain and Panda state that bibliometric tool enables the researcher to investigate the citation and impact factor of the published materials and other features of researchers' interests.^[4] Henceforth, many researchers employed this analysis because of various benefits.

Some advantages of implementing bibliometric analysis were painted by previous studies in bibliometric area. Abubakar *et al* 2021. revealed a recommendation that the university should equip its academic staffs (AcSs) with enough research

resources and programs for dissemination to improve AcSs' productivity.^[5] Barrot unveiled the social media research trend in 2017-2019 which benefited academicians and researchers in planning future programs and research.^[6] Also, Natakusumah 2015 released clues from his findings that to improve the research quality, the researcher might use journal articles as primary references.^[7] Furthermore, in Indonesia context, the Ministry of Education and Research in Indonesia obliges Indonesia AcSs to improve research productivity.^[8] Najmurrokhman *et al* 2020. stated that being productive would not only improve AcSs' recognition but also affect their institution for international recognition.^[9-10]

AcSs productivity in the form of journal article publications has shown big impacts on a department accreditation of higher education institutions in Indonesia.^[11] Because of its importance, Indonesia National Accreditation Board for Higher Education (BAN-PT) put a specific criterion on research and publication among nine accreditation criteria.^[12] This criterion has two items for quantitative assessments, they are the establishment of a research group and the publication numbers. Each item has its quantitative score which automatically appears when the data is inserted in IAPS 4.0

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rubrics (developed by BAN-PT). According to these rubrics, the item of publication numbers is weighted the highest (5.82 points) among sixty-three assessed items in accreditation.^[13] In Indonesia national accreditation this weight points (5.82) would be timed to the quantitative score perceived from IAPS 4.0 rubrics for the publication numbers. Henceforth, the score from the rubric would be influential to the final score of accreditations. However, only the last three years publications records are included in the accreditation assessment. Therefore, implementing bibliometric to analyze the EED-IHEI AcSs' publication is preferable as a self-evaluation for preparing the next accreditation.

Many bibliometric analyses have filled the collage of scientific research in various themes and fields, meanwhile, none of them used this analysis to connect the academic staffs' (AcSs) productivities as prediction toward accreditation success. Henceforth, to fill this gap, this bibliometric study was objected to scrutinize the individual EED-IHEI AcSs' publications from 2014 (the year of EED-IHEI had its first permanent AcSs) to 2021, their citation records, their impact factors, their publication growth during the time span, and its potential to EED-IHEI accreditation score based on Indonesia National Accreditation Board for Higher Education (BAN-PT) assessment instrument.

BIBLIOMETRIC AND ITS ANALYSIS

The term Bibliometric comes from two Greek words "Biblio" and "Metricus" with the meaning of book for "biblio" and measurement for "metricus". Prasetyawan states that bibliometric is a technique to calculate several published articles and their citations.^[14] Then, some scholars develop Bibliometric tool, meaning a tool that is used to measure various types of books such as research books, journal articles, patents, and others. Saleem *et al* 2018. define bibliometric as the statistical or mathematical application to analyze both printed and non-printed materials to determine their significances.^[15] Many bibliometric applications are nowadays available online with two modes of access: free access and paid access. The accessible online bibliometric applications are many, but most researchers use applications such as Web of Science (WoS), Scopus, dimensions, crossruff, Microsoft academic, PubMed, Google scholar, publish or perish, Garuda RistekDikti, Moraref, Sinta RistekDikti, and lens.^[16]

The online bibliometric applications mostly provide similar features such as the identity of publications (title, author, publisher, document link, publication year); the mathematic calculation on *h*-index, *g*-index, and citation number; the number of published documents related to the searched keyword; and analysis in the forms of Figure and table. The presented data in the bibliometric applications become the raw data for the researcher to analyses topic that interests them.

IHEI ACCREDITATION AND BIBLIOMETRIC ANALYSIS

Accreditation is the determination of quality standards or assessment of an educational institution, including a department in IHEIs. Accreditation is also defined as the government's effort to standardize and guarantee the quality of IHEIs alumni so that the quality of graduates is not in doubt. Based on the Regulation of the Minister of Education of the Republic of Indonesia Number 28 Year 2005, the process of determining university accreditation is carried out through the National Accreditation Board for Higher Education (BAN-PT).^[17] This accreditation process is usually carried out by higher education institutions every five years. However, the institution with "C" level achievement in accreditation can do re-accreditation two years later.

The accreditation instrument for a department in IHEI is called as IAPS 4.0 comprises two documents.^[18] The first document contains the department self-evaluation and the second document contains nine criteria to be fulfilled. The criteria are about the vision, mission, goals and objectives; institution governance and cooperation; students; human resources; finances, facilities, and infrastructures; education; research and publications; community service; *tridharma* outcomes and achievements. Based on the IAPS 4.0 rubric for quantitative calculation developed by National Accreditation Board (BAN) for IHEI, the criterion for research and publication serves the highest weight point (5.82 points) from the total 100 weight points for all 63 assessment items in accreditation.^[19-20] Hence, winning research and publication assessment items would contribute a lot to the achievement of the accreditation level.

Bibliometric analysis can help the department in IHEIs to map its current position in research and publication criterion for national accreditation by providing quantitative data from bibliometric applications. It is based on a reason that the accreditation instruments contain not only qualitative data but also quantitative data to be calculated. Hence, departments in IHEI can take benefits of bibliometric analysis to know their position by holding strength, weakness, obstacle, and threat (SWOT) analysis for preparation before real accreditation.

LITERATURE REVIEW

The present research employed a descriptive quantitative design using bibliometric method to analyze the EED-IHEI AcSs' productivities from 2014-2021 and its assessment from the lens of Indonesia National Accreditation Board for Higher Education (BAN-PT) using department accreditation instrument (IASP 4.0 rubric). The bibliometric method was used as it provides a reliable way to analyze productivities, text, and data mining.^[21-22]

The data for the present research were elicited by three criteria: the names of the EED-IHEI AcSs, the publication which included the name of affiliation or university where this research was intended to conduct, and the publications which were done from 2014 to 2021. The intended time span was chosen because the department (EED-IHEI) where this research chose for research setting started to own permanent AcSs in 2014. To gather the data, Hazing's Publish or Perish was set with Google Scholar source search setting and in this research, this application was called as Google Scholar based Hazing's Publish or Perish (GSbHPP). Then, the name of the AcSs was inserted into the author search and the name of the higher education institution (the university or affiliation) to mine their publications data. The affiliation name which was inserted in GSbHPP was similar for all participants. After that, their data were downloaded in the form of .RIS file and transformed into Figure and table.

The gathered data contained the cumulative research publications by the participants of this research. Therefore, some data showed individual publications as single author and some others were co-authorship publications. The reason of gathering cumulative data was because the Indonesia national accreditation counted quantitatively all published research articles by participants as long as they were published in assessed years and stated affiliation where the accreditation was conducted.

The participants of this research were nineteen academic staffs (AcSs) who have been working in an English Education Department in a public Indonesia higher education institution (EED-IHEI) which is situated in Lombok Island, Indonesia. The names of the participants were displayed in acronyms to protect the privacy of the participants. Then, the reason of selecting this English Education Department (EED) was because this EED would like to register for Indonesia National Accreditation in the end of 2020. This department achieved 'C' score for its accreditation in 2019 and would like to increase its national reputation through achieving higher accreditation score.

The data analysis was conducted through some steps in accordance with the objectives of this research. First, the calculation to get the total numbers of publications of every AcSs was done to discuss the individual productivity throughout the chosen time span. Second, the researcher mined the citation score of every AcSs from .RIS file downloaded from GSbHPP to discuss the citation records of each AcSs' publications. Third, to discuss the yearly impact factors publication, the quantitative calculation was conducted by dividing the total publications in a year by the total citations in the same year following the UIC Library's impact factor (IF) calculation framework.^[23] The citation numbers used in the IF calculation were obtained from each article's

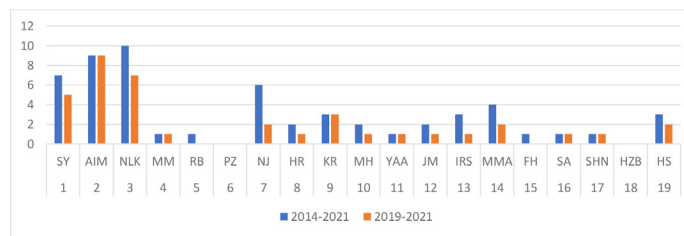


Figure 1: EED-IHEI AcSs' Publication in Two Time Periods.

citation data mining from GSbHPP. Fourth, calculation of publications number every year was done to know the growth of EED-IHEI AcSs' publications from 2014 to 2021. Lastly, categorizing the EED-IHEI AcSs' publications from 2014 to 2021 based on the geographical and journal accreditation scopes of publications. The publication scopes were: 1) published in non-accredited national journal; 2) published in an accredited national journal; 3) published in an international journal; and 4) published in a reputable international journal. Then, the numbers of all categories were calculated according to the formula in IAPS 4.0 rubrics developed by Indonesia National Accreditation Board (BAN) as presented in Figure 1. The rubric scores are ranged from 0-4 which means that if the assessed item shows score 4 (four) in IAPS 4.0 rubric, this item reaches the top score or meeting the highest standard for the Indonesia national accreditation.^[19,20] However, the score perceived from this rubric calculation would not be final as it would be timed to the weight point (5.82) of the publication numbers item for getting this item final score following the formula prepared by the Indonesia National Accreditation Board (BAN).^[19] For details, this calculation would be described in results and discussion part.

RESULTS AND DISCUSSION

This study was aimed to analyze the academic staffs' (AcSs) productivities in an English Education Department (EED) at an Indonesia higher education institution (IHEI) from the lens of Indonesia national accreditation for higher education (BAN-PT). The focuses were on ascertaining the individual EED-IHEI AcSs' publications from 2014 (the year of EED-IHEI had its first permanent AcSs) to 2021, their citation records, their impact factors, their publication growth during the period, and their impact on EED-IHEI accreditation score based on Indonesia National Accreditation Board for Higher Education (BAN-PT) assessment instrument. Hence, the finding and discussion of the study were divided thematically based on the aforementioned study objectives.

The Individual Eed-Ihei Acss' Publications (2014-2021)

EED-IHEI started to provide official academic service in July 2016 under the legal operation letter signed by rector No: 246/In.12/PP.00.9/SK/FTK/05/2015 and legal establishment

letter signed by General Director of Islamic Higher Education of Indonesia No. 1265 year 2015.^[24] Therefore, the first batch started to study at EED-IHEI was in August 2016. However, this department had already had some permanent AcSs who taught English for Specific Purposes (ESP) in other departments in the same higher education institution since 2014. That was why the publications which were recorded in GSbHPP application included AcSs' publications in years before the department's official operation. The data search in GSbHPP application was done by inserting the AcSs name and affiliation name "university *official name*".

According to the EED-IHEI data that were documented in September 2021, there were nineteen active AcSs comprised seventeen permanent AcSs and two non-permanent AcSs. According to the department data, EED AcSs started their academic careers at the department in a different years. Consequently, the number of publications of individuals was varied as described in Figure 1.

Figure 1 shows the individual EED-IHEI AcSs' publications in two time periods: the period of 2014-2021 and the period of 2019-2021. The period of 2014-2021 represented the period of all publications were done by EED-IHEI AcSs which were mined from Google Scholar using Harzing's Publish or Perish application. The period of 2019-2021 (three years period) was the eligible period of EED-IHEI AcSs' publications for the department's next national accreditation. However, the only period of January – August was included in 2021 because this study was conducted in September 2021.

The above Figure shows that NLK was known as the most productive academic staff by publishing ten journal articles during the time span and owned seven publications in the last three years. The second most productive academic staff was AIM with nine published documents in both time periods. This mean that AIM has started to acknowledge his publication with his current affiliation since 2019. The third most productive staff according to Figure 1 is SY with a total of seven publications. Then, in the last three years, SY published five journal articles. These top three most productive AcSs might have a stable attitude of mind to motivate themselves to be productive for publications.^[25]

Discussing the AcSs' productivities, another way to analyze it was by finding the average number of publications during the time span. The average numbers of publications from 2014 to 2021 were three journal articles. It means that the EED-IHEI AcSs' who owned more than three publications would be recognized as productive. Then, Figure 1 reveals that there were eight AcSs that belonged to the productive category. In percentage, there was only 42.1% AcSs were categorized as productive. The identical finding appeared between 2019 and 2021 with two documents of average publications number.

The data showed that only seven (36.8%) from nineteen EED-IHEI AcSs were categorized as productive.

Both periods' data in Figure 1 reveal fact that the majority of AcSs' productivities were below the average. This might be caused by insufficient support from the institution to conduct research and disseminate it.^[5] Another possible cause is about AcSs' insufficient awareness of the importance of their productivity to support their institutions' growth.^[8,11] Moreover, the AcSs' ignorance on writing their affiliation name correctly in their journal article might not improve their institution recognition. Virasta explains that webometric harvests the institutional repository which requires every academic staff to support his/her institution by stating the name of their institution correctly in publication.^[26] However, the government, through the Ministry of Education and Research has already obliged AcSs in Indonesia to be active in research.^[12] Therefore, it is preferable for both the institution and all AcSs to work cooperatively for improving productivity.

Observing the varieties of publication numbers among EED-IHEI AcSs as presented in Figure 1, a factor that might influence it was each AcSs differences to begin their career in higher education. Consequently, the AcSs' publications had been completed with the institution or affiliation name (this research setting) in different years as shown in Figure 2. However, the actual productivities of the AcSs might be started in earlier years. Muayyad stated that the productivities of staffs could be compared if they started to work at the same time.^[27] This idea assumed that the EED-IHEI AcSs' productivities would increase above this research findings if all participants in this research had a similar year to start working in the institution and put a similar affiliation name in the publication.

Figure 2 shows that the average years of publications of all AcSs was 3.89 years or 33.5 months. There were eleven AcSs (57.9% of all AcSs) who had more years of publication experience than the average. Three AcSs (IRS, MMA, FH) stood as the longest years of publication experience with eight years GSbHPP records. On the other hand, two AcSs (HZZ and PZ) did not have any records of publications in GSbHPP which resulted in 0 years of publication experience. Pardjono

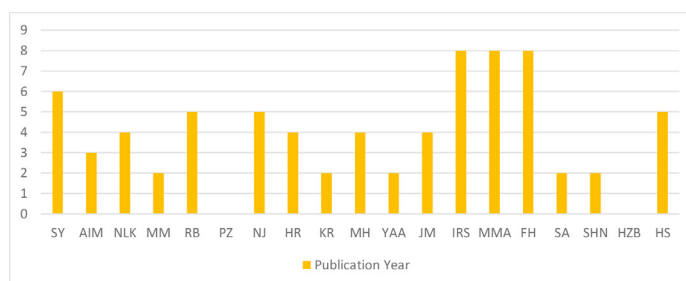


Figure 2: EED-IHEI AcSs' years of publications experience.

et al. state that there are some demotivating factors that affect one's publication productivities namely unaffordable journal publication cost, huge workload, and limited access to get data or resources.^[28] Another reason, there was a possibility that the AcSs did not put the similar name of this research setting affiliation or they did not update their Google Scholar data.^[29] As a consequence, both the institution and the AcSs should search for solutions to improve publication productivity by minimizing the demotivating factors.

The Citation Records of Eed-Ihei Acss' Publications (2014-2021)

Citation becomes one of the focuses of this study as it might show the scientific contribution worldwide.^[30] Moreover, citation of the journal article can be used as the evaluation of scientist reputation and measures the scientific research products quality.^[31-32] In line with this, GSbHPP application provides data regarding the citation of the documents. The application presents numbers of citations of every academic staff in EED-IHEI as presented in Figure 3 below.

Figure 3 explains that there were imbalanced numbers of citations among EED-IHEI AcSs. According to data mined from GSbHPP, NLK's publications had been cited the highest (169 times) followed by AIM with 60 citations and MMA with 30 citations. The three AcSs had citation numbers above the average citation numbers (15 citations) from 2014 to 2021. Some factors might cause this high number of citations, such as the research keywords make interests of other researchers and the area of research is matched with other researchers' expertise.^[23] However, the rest of the AcSs gained a lower citation number than the total citations average.^[33] To boost the citation number, the EED-IHEI AcSs can check and complete their publication data in research repositories such as SINTA RistekDikti and making sure that their research data in Google Scholar have been correctly input.^[34] Also, Liskiewicz *et al* 2021. in their research claimed that citation numbers of articles were influenced by length and number of cited references as well as numbers of authors, affiliations, and countries.^[33] Hence, they suggested that EED-IHEI AcSs'

future publications would consider Liskiewicz *et al* 2021. findings to improve their research publication citations.

The Impact Factors of Eed-Ihei Acss' Publications From (2014-2021)

Impact factor (IF) represents the result of measurement to the frequency of the average articles cited in a certain year.^[35] The IF describes the rank or level of a journal by calculating the times it is cited.^[36-37] The IF of EED-IHEI AcSs' publications was done based on data documented from GSbHPP application. The result of the IF quantitative calculation is presented in Table 1.

Table 1 shows quantitative calculation on the comparisons of the number of publication citations with the number of published journal articles per year. The citation numbers in Table 1 were that total number of citations of each article published in the respective year which the data were obtained from GSbHPP mining. The impact factor calculation adopts the formula discussed by Balakrishnan mentioning the impact factor (IF) is calculated by dividing the number of citations in the journal year by the total number of articles published in the years.^[38] According to this formula, the table shows that the IF of EED-IHEI AcSs' publications achieved the highest in 2014 with 15.50 score. The second highest IF was in 2019 with 8.76 score while the third was in 2020 with 4.24 IF score. Discussing those three IF scores, the lower the IF score does not reflect the fewer numbers of article publications. According to Joannah, IF score above 10 is categorized as very high, while 3 and around is high, and below 1 is average.^[39] Therefore, comparing Joannah categories and the average IF score in this research period in Table 1, the publications IF was categorized as high.

Also, Table 1 shows that in 2019, the published articles were seventeen and were only two articles in 2014. In addition, the similar number of published articles do not reflect similar IF

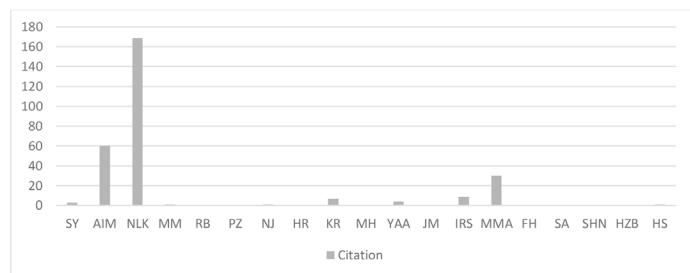


Figure 3: The citation records of EED-IHEI AcSs' publications from 2014 to 2021.

Table 1: Yearly Impact Factors of EED-IHEI AcSs' publications.

Year of Publication	Numbers of Articles	Citation	IF
2014	2	31	15.50
2015	0	0	0.00
2016	1	0	0.00
2017	5	21	4.20
2018	10	11	1.10
2019	17	149	8.76
2020	17	72	4.24
2021	5	1	0.20
Average IF from 2014-2021			3.08

scores as shown by data in 2019 and 2020 (Table 1). Both years produced seventeen articles but they had different IF score.

The importance to notice the impact factor is about knowing how importance is the scientific publication in its field and recognizing the number of article popularity from its citation records.^[40] Table 1 depicts that in 2019, the EED-IHEI AcSs' publications reached their peak of popularity and showed their importance in its field. This was recognized from its highest number of citations across years. However, the individual article popularity was achieved by each article was in 2014 by the average of citations of 15.50. Since some studies explain the use of IF as an indicator of scientific contribution to society, therefore, the EED-IHEI AcSs should be able to produce scientific articles that attract the attention of researchers in the field.^[41]

The Eed-Ihei Acss' Publications Growth During (2014-2021)

After grouping the publications of EED-IHEI AcSs' publications according to the year when they were published, the growth of publications can be seen in Figure 4.

Figure 4 clearly describes the dynamic changes of the article publication numbers according to the year when the AcSs published their articles. At the beginning of EED-IHEI operation in 2016, there was only one publication done by AcSs. However, the gradual increase of publication numbers was shown in 2017 with five publications, 2018 with ten publications, and seventeen publications in 2019. In 2020, the publications remained stable compared to the previous year. The publication numbers in 2021 declined to five published articles, which might be caused by incomplete data mining during the year. But the overall data are pictured in the Figure 4 shows increasing in the last three years of publication. This good progress implied better EED-IHEI AcSs' performance and quality.^[42] Moreover, the Indonesia National Accreditation Board for Higher Education (BAN-PT) considers this gradual increasing guarantee outstanding achievement for the department accreditation.^[18]

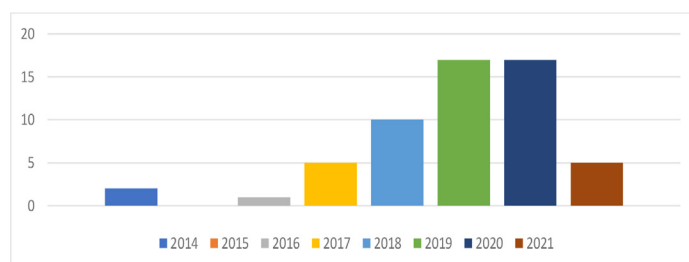


Figure 4: EED-IHEI AcSs' Per-Year Publications.

The Impact Of Eed-Ihei Acss' Publications On Its National Accreditation

EED-IHEI had been accredited in 2019 by the Indonesia National Accreditation Board for Higher Education (BAN-PT). However, the department was interested to upgrade its accreditation score and level. Henceforth, the earlier result of accreditation triggered the department to strive harder preparing for better accreditation achievement in the next two years after the earlier.^[43] Hence, knowing the department's scientific capital in terms of EED-IHEI AcSs' publications in the last three academic years is pivotal. Luckily, Figure 4 has shown a high increase in numbers of EED-IHEI AcSs' publications in 2019-2021 with thirty-eight publications scattered in four domains: four publications in international journals, seven publications in reputable international journals, four publications in non-accredited national journals, and twenty-three publications in national accredited journals. This increasing number of publications during 2019-2021 was due to some factors such as: 1) the head of department demanded EED AcSs to be more productive for meeting the standard of Indonesia national accreditation criteria and 2) starting in 2019, the university has provided rewards for the best three most productive AcSs by publishing articles in journals which this program successfully fostered AcSs' productivity.

To know the standpoint of EED-IHEI AcSs' publications from the point of view of assessment for accreditation by BAN-PT, the quantitative simulation using IAPS 4.0 rubrics for research and publication numbers criterion developed by BAN-PT was conducted.^[20] Then, the result of this simulation is presented in Table 2 as follows:

Table 2 presents that the quantitative simulation for EED-IHEI AcSs' publication point was 4.00 (instrument score range is 0.00 - 4.00) for forthcoming accreditation with the present publication numbers (2019-2021). According to Indonesia National Accreditation Board (BAN), score four indicates that EED-IHEI AcSs performed well in research and publication criterion and achieved highest IAPS 4.0 score.^[20] Furthermore, for final department accreditation final score which is actually the accumulative score from 63 criteria scores, the research and publication numbers item contributed score of 23.30. This final score was perceived from the IAPS 4.0 rubric score for the research and publication item times to its weight point (5.82).^[19-20] By achieving 23.30 score for research and publication numbers criterion in accreditation, EED-IHEI had successfully saved 5.82% of final accreditation criteria score. This result might increase the confidence of EED-IHEI to achieve a higher level in national accreditation since good management in preparation would result in maximum performance or achievement.^[44] However, to maintain the EED-IHEI AcSs' productivity for sustainable academic performance, the institution needs to cultivate the

Table 2: EED-IHEI AcSs' Publications Quantitative Simulation using IAPS BAN-PT Rubric.

No	ITEM	INDICATOR AND ASSESSMENT	SCORE
56	C.9.4.b Penelitian dan PkM (C.9.4.b Research and PkM)	Jumlah Publikasi di jurnal dalam 3 tahun terakhir (Publication numbers in Journal in the last 3 years)	
		N_{A1} = Jumlah publikasi di jurnal nasional tidak terakreditasi (Publication numbers in non-accredited national journal)	4
		N_{A2} = Jumlah publikasi di jurnal nasional terakreditasi (Publication numbers in accredited national journal)	23
		N_{A3} = Jumlah publikasi di jurnal internasional (Publication numbers in international journal)	4
		N_{A4} = Jumlah publikasi di jurnal internasional bereputasi (Publication numbers in reputable international journal)	7
		N_{DT} = Jumlah dosen tetap (Numbers of permanent lecturers)	17
		$R_1 = N_{A4} / N_{DT}$	0.41
		$R_N = (N_{A2} + N_{A3}) / N_{DT}$	1.59
		$R_L = N_{A1} / N_{DT}$	0.24
		Skor (Score)	4.00

AcSs' academic habit through some programs. Some of the possible programs are holding scientific writing workshop, establishing coaching clinic program, and preparing incentive for every journal publication.^[11] This result suggests replication of practice and understanding to implement publication and research self-evaluation with rigorous measurement for future accreditation or actions.

CONCLUSION

Bibliometric as a tool to collect publications from scholars worldwide had been used to unveil some facts to achieve this research's objectives. The analysis showed that there was a gap in the numbers of EED-IHEI AcSs' publications. Some AcSs published documents more than the average number, while some others did not. The same condition appeared for the individual publication citation record, which implied the need of each AcS to share their publication in a wider scope to be more acknowledged. The average EED-IHEI AcSs' citations as long as the operation of the department was high which affected high average score for the publication impact factor (IF average score = 3.08 in the period of 2014-2021). Furthermore, EED-IHEI AcSs' publications grow significantly in the last three years (especially in 2019 with IF score of 8.76) and this finding supports EED-IHEI to achieve a better accreditation score for research and

publication number criterion after quantitative calculation simulation was conducted using IAPS 4.0 assessment rubric. Hence, the practical implication toward bibliometric has been induced for measuring academic performance in IHEI.

Although this study has shown the benefits of bibliometric analysis concerning the need for accreditation which has not yet been done by others, we recommend further studies to explore more bibliometric features to get more comprehensive data and connect them with other criteria for accreditation. Also, employing bibliometric analysis in a wider scope and different fields of study would trigger better interests.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

AcSs: Academic Staffs (lecturers that were officially registered in English education department in Indonesia higher education institution where this research was conducted); AcS: Academic Staff (a lecturer or a participant in this research); EED-IHEI: English Education Department in a public Indonesia Higher Education Institution (a chosen department in a public university in Indonesia which was used as the setting of this research); BAN: *Badan Akreditasi Nasional* or National Accreditation Board (BAN is board of accreditation in Indonesia that has responsibility for keeping the education quality assurance in various levels of education); BAN-PT: *Badan Akreditasi Nasional Perguruan Tinggi* or National Accreditation Board for Higher Education; IAPS: *Instrumen Akreditasi Program Studi* or Study Program Accreditation Instrument (this instrument contains rubric for a study program or department in a higher education in Indonesia to conduct self-assessment); IF: Impact Factor (It represents the result of measurement to the frequency of the average articles cited in a certain year); GSbHPP: Google Scholar based Harzing's Publish or Perish (an online computer application or software for publication data mining).

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