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THE LEVEL OF ACADEMICS' ENGAGEMENT IN THE HIGHER EDUCATION: HOW ARE THEY REFLECTED IN RESEARCH BEHAVIOR?

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Abstract. Academics' are an important element in developing higher education with their role on knowledge development through research. To realise excellent results of research, we need academics whose strong engagement on it. This research measures level of academics' engagement on research in Institut Teknologi Bandung, an outstanding research university in Indonesia. The results show that level of the academics' engagement is high with the highest score is dedication aspect. This engagement can be reflected in various outputs such as scientific publication, innovation in teaching method, and social empowerment like new product development, consultancy, project with institution or industry, creating popular book, and developing social business. High passion and self-motivation are factors that make academics have directed research by concerning in certain output. From this research, it can be recommended two things. First, it is important for policy makers in particular institution to be aware with various concern of academics so that they can propose proper policy to switch from research quantity into quality. Second, requirement for promotion with emphasis on publication should be evaluated by considering another research outputs.

Keywords: academics' engagement, research behavior

INTRODUCTION

Higher education is required to provide research that able to anticipate problems and themes of debates as a way to develop concepts and generate knowledge (Teichler, 2003). Academics is part of employee that is the most crucial capital that can help the sustainability of an organisation (Stephanie and Gustomo, 2015). As developing country, Indonesia is still facing problems regarding academics performance (Sukirno, 2017). In the Southeast Asia scope, publications from Indonesian scholars rank number three in 2017 under Malaysia and Singapore (http://www.scimagojr.com). Since issuance of Ministerial Regulation No. 20/2017 which pushes middle-level to high-level scholars to get published in journals or else lose their allowance, the journal has received 10 times the usual number of submissions[1]. Unfortunatelly, it is still has poor quality on average[2].

The number of international publication for Indonesian researchers compared with some Southeast Asian countries is very low, furthermore Indonesia has less reputable international journal (Wiryawan, 2014). Whereas, publication in prominent journals is actually becomes parameter in particular for career promotion even not one and only (Ministry of Research and Higher Education, 2019). Results from good research quality are reflected in other outputs such as creating new prototype products and patents. With only 89 researchers per 1 million compared with 2274 for Malaysia (World Bank, 2019[3]), it shows that Indonesian researchers are more productive. From this, it is interesting to explore how really academics' engagement happens from this few numbers. Finally, we can recommend several ways in how to increase research output to be more qualified than now.

This research uses Institut Teknologi Bandung (ITB) as case study. ITB was Indonesia second rank of publication according to scopus in 2018 and the best university in Indonesia according to Ministry of Research and Higher Education in 2018. Meanwhile, we use Utrecht Work Engagement Scale (UWES)-17 as tool to measure engagement level. UWES is a questionnaire that includes the three constituting aspects of work engagement: vigor, dedication, and absorption (Schaufeli and Bakker, 2003). Work engagement has a positive impact on job performance (Bakker and Demerouti, 2008) that it is the positive antipode of burnout (Schaufeli et al., 2002 ; Schaufeli et al., 2006). From this measurement, we will know actually score of academics' engagement on research.

Then, we will explore how this engagement level will be reflected in which outputs. To get this findings, we did in-depth interview with some related respondents. This findings will become recommendation for policy makers both university level or national level to take proper actions to increase research atmosphere in academics world. Finally research output will be more qualified than before. By optimizing its quality, research output will contribute to our better life. Ulku (2004) revealed in journal

[1] https://www.thejakartapost.com/news/2018/06/10/wanted-6000-new-journals-to-publish-150000-papers.html
[2] As Henri A. Verbrugh said in The Jakarta Post https://www.thejakartapost.com/academia/2018/12/20/breaking-with-the-past-no-more-negligence-in-research.html
[3] https://data.worldbank.org/indicator/SP.POP.SCIE.RD.P6

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of International Monetary Funds (IMF) that Growth Domestic Product (GDP) of a country has positive relationship with innovation where research as its engine.

In this research, we propose two questions. First, what are the levels of engagement and its elements among academics ? How does the scores mean?. Second, how those levels of engagement are reflected in research behavior ?. To answer those questions comprehensively, we set this article into six chapters ; first chapter will be introduction of this research, second chapter will be theoretical framework, third chapter will be research methodology, fourth chapter will be research findings, fifth chapter will be analysis and discussion, and the last chapter will be conclusions.

THEORETICAL FRAMEWORK

Defining Engagement

Engagement is a term for people enjoying other things outside work and unlike workaholics, they do not work hard because of a strong and irresistible inner drive and for them working is fun (Bakker and Demerouti, 2008 ; Schaufeli and Bakker, 2003). As opposite of engagement, workaholic is expected to relate with an overwork climate and it is a "bad" kind of heavy work investment (Schaufeli, 2016). Work engagement have positive, whereas workaholic has negative consequences for life satisfaction (B. Bakker et al., 2013). Schaufeli et al. (2006) revealed that work engagement may be conceived as the positive antipode of burnout. Burnout is characterized by a combination of exhaustion (low activation) and cynicism (low identification) (Schaufeli et al., 2002). Employees with more professional self-efficacy will perceive more challenge demands and fewer hindrance demands, and it will relate to more engagement and less burnout (Ventura et al., 2015).

Work engagement can be defined as a positive, fulfilling, work-related state of mind (Schaufeli et al., 2002 ; Bakker and Demerouti, 2008) that is characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). Furthermore, Schaufeli et al. (2002) revealed that vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge. While, absorption, is characterized by being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work.

Engaged employees are more creative, more productive, and more willing to go the extra mile (Bakker and Demerouti, 2008). Employees who are engaged and perform well are able to create their own resources, which then foster engagement again over time and create a positive gain spiral (Bakker and Demerouti, 2008). Employees who are engaged in their work are fully connected with their work roles. They are bursting with energy, dedicated to their work, and immersed in their work activities. They feel full of energy and dedicated to reach their work-related goals, and also often fully immersed in their work (Bakker, 2011). Engaged employees are characterized by high on optimism, self-efficacy, resilience and self-esteem. They experience positive emotions, including happiness, joy, and enthusiasm; experience better health; create their own job and personal resources; and transfer their engagement to others (Bakker and Demerouti, 2008).

Beside practitioners, employee engagement is an important issue for academics (Mmako, n.d.). The study about that has increased substantially over the last decade among practitioners and academicians (Jose and Mampilly, 2014). Tien et al. (2017) and Njuguna (2013) studies revealed about factors that affect academics' engagement on research and Mmako, n.d. similarly mentioned about that even specificly directed to engagement factors of their professional tasks. Meanwhile, Sukirno (2017) generally mentioned some factors that affect academics performance. Wasilowski (2016) mentioned influence of financial to staff of higher education, meanwhile Association of Colleges (2014) officially published employee engagement in further education by stressing on assessing level of employee engagement from selective case studies of six higher education in UK. From there we know that there is no specific research that use UWES to measure specificly about level of academics's engagement on research and how it was reflected to research behavior in various outputs. So, this is a new thing that will be delivered by this research with its unique case study and focused problem there.

Measuring Engagament with UWES

Utrecht Work Engagement Scale (UWES) is a tool to measure engagement that was developed by Schaufeli and Bakker (2003). This tool is a self-report questionnaire whose three constituting aspects of work engagement; vigor, dedication, and absorption. Schaufeli and Bakker (2003) interpreted that vigor is assessed by the following six items that refer to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. Dedication is assessed by five items that refer to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it. Meanwhile, absorption is measured by six items that refer to being totally and

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happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one forgets everything else that is around.

This tool is usually used in various researches about employee engagement. Breevaart et al. (2014), Lu et al. (2014), and Rayton and Yalabik (2014) used shorten UWES questionnaire (9 items of questions) to measure day-level work engagement of maternity nurse, exploring job-fit of Chinese employees of a high technology company, and measuring work engagement of Bank employees in UK. This tool was also used to predict newcomer work engagement (Cooper-Thomas et al., 2014), measured the level of employee engagement experienced by the employees in the selected organisations in some Indian companies (Jose and Mampilly, 2014), and predicted work engagement in Spain (Ventura et al., 2015). Meanwhile, UWES-17 was ever used as dependent variable to measure employee engagement of nine hotels in Jamaica (Rigg et al., 2014) and as material to measure employee engagement of individuals from across the United States (Strom et al., 2014).

In our research, we use UWES-17 to measure engagement level of academics specificly on their research. We translate this questionnaire into bahasa (Indonesian language). From this measurement, we explore how academics coriousity of their work especially in how they attract to the research. Even generally this tool generally used for employee of a company, this tool is also relevant in measuring academics' engagement especially in their required work such as research. Those three dimension of engagement are basic in engagement literature discourses.

RESEARCH METHODOLOGY

Research Design

This research adopts deductive reasoning with mixed method. Cresswell and Plano Clark (2011) revealed that mixed methods design in which the researcher begins by conducting a quantitative phase and follows up on specific results with a second phase that is qualitative phase. Here, we use numeric data through survey as basis data then we explore exploratory of its analysis using data from in-depth interview. We use existing theory about work engagement with its main characteristics of vigor, dedication, and absorption. This research uses case study of academics in Institut Teknologi Bandung with two reasons. First, ITB was Indonesia second rank of publication according to scopus in 2018. Second, ITB was the best university in Indonesia according to Ministry of Research and Higher Education in 2018.

Data Collection

The data was collected into two phase. First, the data was collected through survey by spreading UWES-17 qustionnaire to 12 faculties in ITB by each of them getting 30 items. Beside that we did snowball way by asking well-known academics' and recommendation of previous responden to fill the questionnaire. As its results, we earned 138 respondents with nearly balance for every faculty. The details are 16 professors, 27 associate professors, 56 assistant professors, 11 academicss, and others (28 people). This numbers is 10 percents of total population (1416 academicss in 2019, ITB[4]). Meanwhile, to explain the result of survey we did semi-structural of in-depth interview to 32 academics that consist of 1 professor, 11 associate professors, 14 assistant professors, 3 academicss, and 3 others. Rate of the interview was 23 minutes. We collected the data from May to November 2018. To complete the data, we collected some datas from various source such as official website of the institution and previous data from previous research in 2016.

Data Analysis

The quantitative data was analyzed using IBM SPSS Statistics 24 with simple statistical technique. Meanwhile, qualitative data from in-depth interview was analysed with coding of relevant statement to research topic. Then we interpretated data by combining it with the existing theories of engagement. Before we collected data survey we checked that the items of questionnaire are valid and reliable. We also did data triangulation for qualitative data by taking more samples for interview that representate every single position of functional title. We also took another resource such as official website of the institution and data from previous research.

RESULTS

Level of Engagement

From the 138 academicss, the data shows that time spending for research is 20 years (25.4 %), 6-10 years (21 %), 1-5 years and 16-20 years for each 17.4 %, 11-15 years (13.8 %), and less than 1 year (5.1 %). Most of research output is publications only (61.6 %), publications and others (12.3 %), publications, patent, and others (10.1 %), publications and patent (8.7 %), nothing (4.3 %), and others (2.9 %). Frequency of the publication annually is uncertain (33.3 %), 1 time (30.4 %), 2 times (19.6 %), 4 times above (12.3 %), 3 times (3.6 %), dan not at all (0.7 %). Most of the research is applied research (24.1 %), semi-applied and applied (15.3

[4] https://dashboard.itb.ac.id/

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%), basic (14.6 %), semi-applied (10.9 %), basic and applied (8.8 %), basic and semi-applied (8 %) and uncertain (8 %). Meanwhile, almost research topic is interdisciplinary research (41.6 %). Based on academic title, respondents of this survey are professor (16), associate professor (27), assistant professor (56), lecturer (11), and others (28) whose have no-title yet.

Table 1. Level of Academics's Engagement on Research

No	Sub-scale	Mean* (N=138)	S.D.	Percentage (%)		
				Low	Medium	High
1	Vigor	5.3128	0.939	-	38.4	60.9
2	Dedication	6.0696	0.759	-	13	87
3	Absorption	4.857	1.857	5.8	49.3	44.9
Engagement		5.3747	0.818	-	32.6	67.4

For measuring engagement level, initially we categorize engagement level into three groups ; low with score (17-51), medium (51-85), and high (85-119) for total of engagement. This category defines interval score from the lowest to the highest into three part equally. For this research, the lowest score is 59 and the highest is 119 with majority of the engagement level is high (67.4 %) and medium (32.6 %). No one for low category. Same way, we did for each element of engagement where vigor whose 6 questions has minimum score 6 and maximum score 42 with low (6-18), medium (18-30), and high (30-42), dedication whose 5 questions has minimum score 5 and maximum score 35 with low (5-15), medium (15-25), and high (25-35), and absorption whose 6 questions has minimum score 6 and maximum score 42 with low (6-18), medium (18-30), and high (30-42).

For the result, almost respondents have high score for vigor (60.9 %) and dedication (87 %). But, dimension of absorption is close with category medium (49.3 %) and high (44.9 %). Meanwhile, on average from interval 1-7, we got level score at 5.3747 (Deviation : 0.81279), with each dimension is vigor 5.3128 (Deviation : 0.93989), dedication 6.0696 (Deviation : 0.75981), and absorption 4.8575 (Deviation : 1.8575). By categorizing from the lowest into the highest then we divide them into three parts equally from the low (1-3), medium (3-5), and high (5-7), the result shows that engagement level of academics' for research is high. Through SPSS testing, correlation between engagement level and functional title is significant at the 0.01 level.

How Engagement is Reflected in Research Behavior

The academics' duty on their works consists of three part – teaching, research, and social empowerment that usually known as Tridharma Perguruan Tinggi. High level of academics' engagement in research is reflected into that. Academics who conducts research are not to specialize into certain kind but can be basic or applied research. This finding similar with what Bentley et al. (2015) revealed that most academics engage in a combination of basic and applied research rather than specializing even applied orientation more common. From 32 interviewees, 2 people (1 lecturer and 1 assistant professor) are in teaching category, 16 people (9 associate professors, 6 assistant professors, and 1 other) are in scientific publication, and 14 people (1 professor, 2 associate professors, 7 assistant professor, 2 lectors, and 2 others) are in social empowerment.

Based on Merriam Webster[5] dictionary, research is investigation or experimentation aimed at the discovery of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws. While good teaching from students' perspectives is a combination of the lecturer's subject knowledge, willingness to help and inspirational teaching methods makes a good university lecturer (Su and Wood, 2012). Social empowerment as defined by constitution of Indonesia number 12 year 2012 is activities of academics that utilize knowledge and technology to help society to reach prosper and educated that can be such patent or appropriate technology. Activities that include to the third point expand to various things such as creating book, product prototype, and consultancy/project that orientate directly to help society.

Academics' engagement on research can be showed in how their research activities have implication into teaching process (education) they deliver, scientific publications they publish, and social empowerment activities they do. For how they are reflected, it will explained here.

Teaching/Education

Research creates positive impact for the lecturers to innovate in teaching process in particular delivering materials and proposing teaching method. The materials will be more rich because the academics can deliver fresh and contextual materials as result of

[5] https://www.merriam-webster.com

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the research as AM lecturer from informatics engineering said. *"… its correlation, I can bring it (research output) into teaching needs. Many things I can bring in enriching teaching materials I have*". Similar statement was revealed by SM, associate professor from Regional Planning Engineering. "*I do research it is to complete my teaching materials, there is knowledge on it*". Academics who engage with research with teaching/education as orientation, they will focus on that because passion, their like to teaching activity. As what GJ assistant professor from faculty and art and design said. "*I do not care, I conduct research about what I like. It is not about scopus or another indexed journal. I do not relate it into popularity. … Its output not just article, but workshop. So, it is not to pursue scopus*".

Scientific Publication

Research can be reflected into scientific publication through journal and conference proceeding that is generally known by academics. Ahmar et al. (2018) revealed that 66,5 % Indonesian academics have known about some indexed journal such as SINTA (initiated by Ministry of Research and Higher Education), DOAJ, Scopus, Web of Science and Google Scholar. Unfortunatelly 76 % of them have never published with journals or proceedings indexed by Scopus. Academics tend to concern in here beside institution direction, also it become requirement of career promotion. For promotion from associate professor to professor normally, academics must have at least one paper published in international reputable journal as first author and four journals if want to bypass one academic rank (associate professor) form assistant professor to professor (Ministry of Research and Higher Education, 2019).

This becomes self motivation to most of academics including SM, associate professor from regional planning engineering. "*… (I have just concern) in journal after there was push from ITB, as requirement of promotion. ITB encourages us to journal*". Beside requirement of promotion, it becomes self motivation as DE, assistant professor from geology department. For him, publication is part of his self-motivation to spread knowledge to all people. Publication for him is such exicted thing, he does not limite scope of publication only in some indexed journals like scopus which is institution goal, but he also do for another media such as open access journal even public media such as social media. "*For me, research should not be interpretated in narrow. Second, its outputs must be published widely or through conference*".

Social Empowerment

The last point, the research can be reflected in category of social empowerment consisting of several outputs such as product development, consultancy, projects, developing social business, and creating popular book. All will be explained further in the following.

First, product development. Product prototype as research output is improved product as the result of collaboration between labolatory and industry. This research is sustainable with its improved product, beside that the product like this has commercial value. The academicss that concern in this kind of output have big team whose researcher or student as its members. The process has been happening in labolatory which is existed since long ago with wide network behind. AJ, assistant professor from mechanical engineering revealed that network relation with senior academics makes reseach orientation to the product can be sustainable. "*It is true, in the first time internship with senior academics whose wide relation. The seniors remain help us, we still have relation with them*". Another academics whose same feeling is IH young academics from mechanical engineering. She revealed that development for engine as her research topic has been supported by faculty. Both academics are from same faculty. "*Luckily in faculty of mechanical and aeronotical engineering there is a lot of work (such as with) INKA (Indonesia Railway Company). Several times, several companies (1-2 companies) develop engine. We help providing numerical analytics services. … I want my research to be impactful for better Indonesia*".

Beside environmental factor that support to research output to product development, academics' passion is also another factor in particular related to how they can create network with industry. AG young academics from environmental engineering revealed that his self motivation to feel having a duty to cooperate with a company related to palm oil waste management. "*Feeling to have a duty, such passionate in there (even) in the first time felt so pressed*". Not only passion, W assistant professor from biology directs his research to product development because for him the process is very exciting. This is part of his idealism to develop product that will have impact for society as a whole with low price. "*.. (my concern) in developing product only. … I am not concern in there (publication). It is so hard. … (my research) process is exciting*".

Second, consultancy. The academics whose this output have strong connection with existing industries, international institution such as their PhD universities, or Government. There is also academics who work valuuntery by becoming consultant for new enterprise that initiated by a society. Academics whose orientation to this output are encouraged by internal motivation. CS, associate professor from faculty of art and design revealed that he feels happy when his research can be used by society. "*… Good, if it (reseach output) is used by society*". Solving social problems becomes self-motivation for E, an assistant professor of civil engineering. This effort is supported by his expertise as water manajement specialist, it can be seen from how he can solve

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ministry of public works related to irrigation. "*If I conduct research what condition I should see. If I think to make improvement, its is better to put better solution, (all about) problem solving*".

Similar internal motivation also been revealed by E, associate professor from pharmacy. For him, research that is being conducted reveals about new findings and creating solving for daily life. "*We can enrich theory. There is theory revealed, new theory from new developments. …. solving problems in life, it drives our mind to think. … to realise it (research output) in daily life*". Beside that, there are academics who are concern their research output to consultancy because for him writing paper for publication is also such working that spend more time as AS from electrical engineering said. Beside he remain conducting research in a big team, he prioritize orientation of research into consultancy with existing industry by reason as part of problem solving. " *… what is the goal of control (knowledge specialization). Goal is to define what thing I will do. … (I am) not satisfied with writing paper, it is consequency of I have already worked, so that I must write. My work is related to how it can be useful. My concern is in not in writing paper. … Such important for me, finding something new that help people solving their problems*".

Third, project. Here project means solving problems of industry/institution in certain time. Generally, academics spends short period of time for this, they still needs research before. WG lecturer from informatics engineering revealed that project he earned was about helping a container port by creating an application and also help in implementing e-marketing for ministry of tourism in Indonesia. For him, doing project makes him happy because it can solve problem, the research output can be implemented in real life. "*… to help a container port by creating an application for them. A lot of things can be conducted, it is interesting. Then about e-marketing that about how to implement it into Indonesian tourism. … There is problem solving. In its implementation, I do research before*".

Fourth, social business. RE, assistant professor from agricultural engineering revealed that his research output is successfully used to help a small enterprise that concern in seed, social community and group through giving consultancy to them. This interaction creates feedback that becoming good input for his research. "*I help a seed enterprise, a service company related to organic waste that many more to group of society, housing, and certain community. … they (society) recognize me not a (commercial) consultant. Here, I like developing a research (from) sharing about their experience*". Beside RE, PP assistant professor form mechanical engineering develop machine for waste recycle that can be utilized directly by society. He directed the research to problem solving that still maintain his core knowledge in mechanical, even the consequency he must learn other knowledge related to environmental. "*… to decreasing amount of waste it with recycling. If we go back to the process behind it, there is technological problem there. … The problem there is not many people writing papers, in this case the society necessarily to be enlightened. … my strategy is (creating) prototype to be problem*".

Fifth, popular book. Two academics orientate their research here. CG assistant professor from Architecture revealed that passion in writing book encourages him to focus on this output. " *… its output is book, where it written in popular style, but it is still based on research. … actually my passion is writing book. This year will be about architecture*". Similar with CG, IW from same department said that popular book can influence a lot of people and it is become media of communication to community. "*…. book can influence a lot of people, it can communicate with society*".

Analysis and Discussion

How does high level of engagement mean ?

From the measurement, score of the academics' engagement is high. It shows that their energy to conduct research is high (vigor), allocate more time to do research and difficult to get out of work (absorption), and to be total in their work (dedication). From this three dimensions, dedication has the highest score. Through SPSS testing, correlation between engagement level and functional title is significant at the 0.01 level. It means that engagement score has positive correlation with functional title. The academics whose position as professor is more engaged to his work than associate professor and so forth. This position generally reflects how long they work as academics and long time to work (tenure) has positive correlation with work engagement.

Vigor

Score rate for vigor which is one of engagement dimension almost same with rate of all score with 5.3128 and 5.3747. From 138 respondents, 60.9 percent of engagement level is in high and 38.4 is in medium. It shows that there is no academics whose no attention to the reseach. Research as routine activity that they do continuously. DH associate professor from Regional planning engineering revealed that the nice thing from research is learning something new every time that have added value for him. Beside that, he is very passionate in research. " *…. the excite thing from research is learning something new because I do not know before. … Its pleasure probably 90 percent in learning, the rest is contribution. … There is no added-value will be demotivated me. It is about passion. … Do the research the best as possible. Do it optimal. If teaching will influence 50 people, research with publication after will impact to people around the world*".

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Dedication

Score rate for dedication which is one of engagement dimension is the upper rate of total score with 6.0696 and 5.3747. From 138 respondents, 87 percent of engagement level is in high and 13 is in medium. It means that academics are dedicated to their research even not all prioritize research as their main activities. It shows they still concern in doing research even many problems rise such as limited funding and complicated birocracy. KA assistant professor from engineering physics revealed that passion makes him continue in doing research. His choice for topic that does not depend on high funding. "*It is about passion, being happy in doing research, so I become an academics. … Theoretical. It is enough with pen, paper, and computer. If there is enough (funding) good, if not the research still can continue*". Beside KA, W assistant professor in biology said that his research directed to developing new product whose impact for society as a whole. "*… product which hopefully can be used by society as a whole*". AS assistant professor for electrical engineering also said similar view. "*Journal remains important, whatever I do, It must have tangible impact. I am not satisfied (in writing) paper. My work is related to how (the research) to be used*".

Absorption

Score rate for absorption which is one of engagement dimension is under rate of all score with 5.857 and 5.3747. From 138 respondents, 44.9 percent of engagement level is in high, 49.3 is in medium, and 5.8 is in low. It means that this dimension is the lowest score. Academics are busy with another not-primary activities so that they have less time in doing research. IK associate professor from urban and regional planning engineering revealed that academics' duty beside teaching, doing research, and social empowering is joining campus management. IK was asked by institution to participate in developing new campus in Cirebon, about three and half hours from center campus in Bandung. "*Institution development seizes my time. It is constrain, reduce my time to conduct research*".

How Reflection of academics's engagement in research means ?

From previous sub chapter above, it shows that high academics' engagement for research can be reflected into various research outputs but still in Tridharma Perguruan Tinggi (teaching, scientific publication, and social empowerment) framework. Social empowerment can be developing new product (prototype), consultancy, creating popular book, developing social business, and doing projects. From these outputs, the most familiar for academics is scientific publication. It because there is external push form both institution and Government (Ministry of research and higher education) that have implication to career promotion. Interestingly, there are academics who does not focus only on scientific publication but also other outputs in particular related to social empowerment for commercial profit or not. Even by focusing on non-publication output, they will get small score for promotion credits, they still have high engagement at least on dimension vigor and dedication as showed by numerical score above.

Different passion

Conducting research is about passion, to search for novelty of some specific knowledge. It is different if research orientation is for publication only that administratively will support them in promotion. This is not about passion actually. They then try hard only to pursue publication by bypassing long journey of research process. Their orientation is not about quality of research but only quantity. Nowadays, academics are pushed to be productive by submitting more papers with various incentives, still not about quality. It is hard to find qualified research output from academics. The environment that can stimulate academics to produce prominent research output is still hard to find. It is because load for teaching is still dominant with 35-55 % of credits (Ministry of Research and Higher Education, 2019) that make academics to focus on it. With the strong encouragement to teaching, there are some academics whose high passion and motivation in research. They orientate output not only for publication but also for other such as developing new product (prototype) or running social business. Or they still focus on publication but only in some world class journal although finally their publication is just a few. They do all this things with passion even many problems rise such as limited funding or rigid (complicated) administration.

Different motivation

In research, academics can be categorized at least into two ; academics whose research roadmap and not. It means they really understand with what they pursue on their research, more just following direction of institution. The academics whose research roadmap are second characteristics for academics' engagement. The outputs can bring benefit for their selves such as excellent research output that potentially being published in reputable journal. Or the results can be directed into practical works such as developing new product (prototype) followed by its use for society as a whole or developing new business. They continuously conduct this research because there is no lack of topic for them. They can find solution when problems rising such as limited funding and complex administration by creating ties with potential stakeholders such as company/institution to get funding. They are willing to spend more time to do research.

What's implications the findings to policy ?

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Understand that academics have different passion and motivation in their research

Doing research is a duty for academics. Usually its result will be written and published to reputable journals. This external push such as scientific publication is assumed such as requirement of career promotion only by some academics. They tend to not to so serious conducting research, hand-off for whole process of research or they hire research assistant to help them. Although there is a condition that research output in particular publication is used as administration requirement, some academics whose high dedication and energy in research. They concern to get high reputable and qualified output of research. Beside they publish in some prominent journals, they have another goal behind. We define passion and directed research here as "idealism" that must be understood by policy makers in particular university leaders and Government. It is necessary for the institution to give different treatment such as directing academics to more focus on research output that they have high concern with such as developing new product (prototype) or patent. This support can be broadening access for funding and network to industry. From here, result of the research will be more qualified and impactful than before.

Evaluate career promotion for the academics

The policy to homogenize all academicss to optimalize their scientific publication must be evaluated after understanding what really happen in academics world. Even less publication created or maybe none, but academics still have good reputation on those research outputs and surely it contribute positively on developing the institution especially in realizing mission toward entrepreneurial university like nowadays implemented by institution (ITB, 2015). Therefore, it is recommended to create proper policy that can appreciate passionate academics' activities to their non-publication works in particular social empowerment. A policy that can be recommended is giving more score for credits higher than before followed by proper remuneration for their non-publication activities. Now, credits for acedemics promotion on range 35-55 % for research with academic paper orientation and 25-45 % and 35-55 % for teaching, while only 0.5 - 10 % for social empowerment (Ministry of Research and Higher Education, 2019). Through this recognition, research culture potentially increases with several improvements in the research outputs so that they in particular scientific publication can switch from quantitity to quality.

CONCLUSIONS AND RECOMMENDATION

Conclusion

- The level of academics' engagement in research is high with the highest score is in dedication aspect.
- High engagement in research can be reflected into several outputs not only scientific publication but also improving teaching methods and several kinds of social empowerment like developing new product (prototype), consultancy, creating popular book, developing social business, and projects.
- Two things that make academics orientate their research to those kind of outputs ; passionate in research and self-motivation. Those two are related each other so that their research has orientation and sustainability.

Recommendation

- It is necessary for leaders of higher education to aware that academics whose high engagement in research are based on passion and idealism that are showed through various research output, not only scientific publication. So, related policy makers need to propose special treatment so that research output become more qualified and impactful than before.
- The requirement of academics promotion with giving high score on scientific publication needs to be evaluated. It is necessary to consider giving another high score on another succesful outputs such as innovative teaching method, consultancy/project, creating new business, and developing new product (prototype).

REFERENCES

Ahmar, A.S., Kurniasih, N., Irawan, D.E., Sutiksno, D.U., Napitupulu, D., Setiawan, M.I., Simarmata, J., Hidayat, R., Busro, Abdullah, D., Rahim, R., Abraham, J., 2018. Lecturers' Understanding on Indexing Databases of SINTA, DOAJ, Google Scholar, SCOPUS, and Web of Science: A Study of Indonesians. J. Phys.: Conf. Ser. 954, 012026. https://doi.org/10.1088/1742-6596/954/1/012026

B. Bakker, A., Shimazu, A., Demerouti, E., Shimada, K., Kawakami, N., 2013. Work engagement versus workaholism: a test of the spillover-crossover model. Journal of Managerial Psychology 29, 63–80. https://doi.org/10.1108/JMP-05-2013-0148

Bakker, A.B., 2011. An Evidence-Based Model of Work Engagement. Current Directions in Psychological Science 20, 265–269. https://doi.org/10.1177/0963721411414534

Bakker, A.B., Demerouti, E., 2008. Towards a model of work engagement. Career Development International 13, 209–223. https://doi.org/10.1108/13620430810870476

ISBN: 978-623-92201-0-5

Bentley, P.J., Gulbrandsen, M., Kyvik, S., 2015. The relationship between basic and applied research in universities. High Educ 70, 689–709. https://doi.org/10.1007/s10734-015-9861-2

Breevaart, K., Bakker, A.B., Demerouti, E., 2014. Daily self-management and employee work engagement. Journal of Vocational Behavior 84, 31–38. https://doi.org/10.1016/j.jvb.2013.11.002

Cooper-Thomas, H.D., Paterson, N.L., Stadler, M.J., Saks, A.M., 2014. The relative importance of proactive behaviors and outcomes for predicting newcomer learning, well-being, and work engagement. Journal of Vocational Behavior 84, 318–331. https://doi.org/10.1016/j.jvb.2014.02.007

Jose, G., Mampilly, S.R., 2014. Psychological Empowerment as a Predictor of Employee Engagement: An Empirical Attestation. Global Business Review 15, 93–104. https://doi.org/10.1177/0972150913515589

Lu, C., Wang, H., Lu, J., Du, D., Bakker, A.B., 2014. Does work engagement increase person–job fit? The role of job crafting and job insecurity. Journal of Vocational Behavior 84, 142–152. https://doi.org/10.1016/j.jvb.2013.12.004

Mmako, D.M.M., n.d. EMPLOYEE ENGAGEMENT: EVIDENCE FROM TVET COLLEGES IN SOUTH AFRICA 15.

Njuguna, D.F., 2013. RESEARCH IN INSTITUTIONS OF HIGHER EDUCATION IN AFRICA: CHALLENGES AND PROSPECTS 10.

Rayton, B.A., Yalabik, Z.Y., 2014. Work engagement, psychological contract breach and job satisfaction. The International Journal of Human Resource Management 25, 2382–2400. https://doi.org/10.1080/09585192.2013.876440

Rigg, J., Sydnor, S., Nicely, A., Day, J., 2014. Employee Engagement in Jamaican Hotels: Do Demographic and Organizational Characteristics Matter? Journal of Human Resources in Hospitality & Tourism 13, 1–16. https://doi.org/10.1080/15332845.2013.807391

Schaufeli, W.B., 2016. Heavy work investment, personality and organizational climate. Journal of Managerial Psychology 31, 1057–1073. https://doi.org/10.1108/JMP-07-2015-0259

Schaufeli, W.B., Bakker, A.B., Salanova, M., 2006. The Measurement of Work Engagement With a Short Questionnaire: A Cross-National Study. Educational and Psychological Measurement 66, 701–716. https://doi.org/10.1177/0013164405282471

Schaufeli, W.B., Salanova, M., Lez-Roma, V.G., Bakker, A.B., 2002. The Measurement of Engagement and Burnout: A Two Sample Confirmatory Factor Analytic Approach 22.

Strom, D.L., Sears, K.L., Kelly, K.M., 2014. Work Engagement: The Roles of Organizational Justice and Leadership Style in Predicting Engagement Among Employees. Journal of Leadership & Organizational Studies 21, 71–82. https://doi.org/10.1177/1548051813485437

Su, F., Wood, M., 2012. What makes a good university lecturer? Students' perceptions of teaching excellence. Jnl of Applied Research in HE 4, 142–155. https://doi.org/10.1108/17581181211273110

Teichler, U., 2003. The future of higher education and the future of higher education research. Tertiary Education and Management 9, 171–185. https://doi.org/10.1080/13583883.2003.9967102

Tien, D.H.T., Higgins, J., Thornton, D.K., 2017. A Case Study: Exploring Factors Affecting Lecturers' Research Engagement in a University in the Mekong Delta Region 3, 15.

Ventura, M., Salanova, M., Llorens, S., 2015. Professional Self-Efficacy as a Predictor of Burnout and Engagement: The Role of Challenge and Hindrance Demands. The Journal of Psychology 149, 277–302. https://doi.org/10.1080/00223980.2013.876380

Wiryawan, K.G., 2014. The current status of science journals in Indonesia. Sci Ed 1, 71–75. https://doi.org/10.6087/kcse.2014.1.71

Association of Colleges. 2014. Employee Engagement in Further Education

Ulku, Hulya. 2004. R&D, Innovation, and Economic Growth : An Empirical Analysis, IMF working paper WP/04/185

Institut Teknologi Bandung. 2015. Rencana Strategis Institut Teknologi Bandung 2016-2020

Ministry of Research and Higher Education. 2019. Pedoman Operasional Penilaian Angka Kredit Kenaikan Jabatan Akademik/Pangkat Dosen, Direktorat Jenderal Sumber Daya Iptek dan Dikti, 2019

Sukirno. 2017. Modeling Academic Professional Performancein Higher Education, INTERNATIONAL JOURNAL OF ENVIRONMENTAL & SCIENCE EDUCATION2017, VOL. 12, NO. 8, 1689-1708

Stephanie and Gustomo. 2014. Proposal to Improve Employee Engagement in PT Maju Sentosa by AON Hewitt Model and Mercer Model, Procedia - Social and Behavioral Sciences 169 (2015) 363 – 370

Wasilowski, Stuart. 2016. https://works.bepress.com/stuart_wasilowski/12/