# **Pedagogical Research**

2021, 6(1), em0087 e-ISSN: 2468-4929

https://www.pedagogicalresearch.com

#### **Research Article**



# Best Practices of Higher Education Institutions (HEIs) for the Development of Research Culture in the Philippines

Mark Cleeford Layugan Quitoras 1\*, Julian E. Abuso 2

Citation: Quitoras, M. C. L. & Abuso, J. E. (2021). Best Practices of Higher Education Institutions (HEIs) for the Development of Research Culture in the Philippines. *Pedagogical Research*, 6(1), em0087. https://doi.org/10.29333/pr/9355

#### **ARTICLE INFO**

#### **ABSTRACT**

Received: 3 Aug. 2020 Accepted: 17 Oct. 2020 Sustainable research culture is impetus for the realization of educational institution's mission and vision. Academic leaders such as president, dean, and research director must act into power and think of strategy and programs so that their faculty members will be inspired to conduct research and publication. This study aims to discover the best practices of the three (3) higher education institutions in the management of research in downtown universities in Metro Manila, Philippines. Several best practices are shared during one-on-one interviews with the president, deans, research directors, and Focus Group Discussion with faculty members in respective research settings. This research article intends to motivate higher education institutions enhance and sustain their research culture by adopting and learning from the said best practices.

Keywords: best practices, research culture, HEIs

# INTRODUCTION

I have been working in the research office for almost a decade, one thing that I noticed is that there are only a few faculty members doing research. The same faces of faculty members submitting research proposals and applying for publication incentives. My observation is one of my motivations why I embarked on this research endeavor, with the hope of helping not only our university but also other higher education institutions increase their research productivity. Optimistically, HEIs can nurture their research culture by learning from the best practices of selected HEIs. Given these best practices in the management of research, HEIs have a great chance of fulfilling their research functions.

The three fundamental functions of HEIs are instruction, research and extension. In all HEIs, faculty members are regarded as the front liners, who spearhead in carrying out the said basic functions. Educational attainment and professional experience are pieces of evidence that show faculty members' capacity to deliver instruction to students. Doing extension work or community service is another function of an academic institution where faculty members partake in the implementation of outreach programs.

The purpose of this study is to describe the best practices of selected higher education institutions (HEIs) the Philippines as regards development of research culture in order to help the academic leaders in formulating research policies and motivating their faculty members be engaged research and become producer of knowledge.

## Impact of Research in HEIs and National Development

Research is another major function of HEIs where faculty members are expected to produce knowledge which are beneficial to the institution and national development. Like in the case of China, Chen (2012) discussed in her study that Chinese higher education system has transformed its function from knowledge dissemination and training personnel to knowledge production and transfer. Chinese universities contribute knowledge through research output and knowledge transfer, which are usually measured by research and development activities and output. In recognition of the importance of research and development, the Chinese government had invested strategically in developing research universities by allocating revenues as full support to encourage knowledge production, innumerable research grant awards, such as: the National Research Projects, National Key Laboratories, National Key Projects of Basic Research, National Research Bases of Humanities and Social Science, and National Awards of University Science and Technology. Through the deliberate effort to create a culture of research, where management of such is not left to chance and initiative of the Chinese government, it is safe to conclude that research has propelled China to attain its present status as one of the powerful countries in the world.

<sup>&</sup>lt;sup>1</sup>Researcher-Writer, Office of Research Coordination, University of the East, PHILIPPINES

<sup>&</sup>lt;sup>2</sup>Dean, Graduate School, University of the East, PHILIPPINES

<sup>\*</sup>Corresponding Author: markcleeford.quitoras@ue.edu.ph

Furthermore, the value of research is way beyond simple addition in the body of knowledge, Georghiou (2015) mentioned multiple ways in which research achieves impact and creates value, these are: 1) increasing the stock of useful knowledge, 2) training skilled people, 3) creating new scientific instrumentation and methodologies, and collaborating with users in the use of such facilities, and 4) collaborating in research projects and networks with users. Additionally, Additionally, Georghiou emphasized that:

Research and innovation lie at the heart of Europe's economic strategy and make a critical contribution to the development of its society and cultures. They are a key source of new jobs, growth and competitiveness and underpin a wide range of policy priorities including digital Europe, energy efficiency and sustainability (p. 4).

Apparently, research has significantly contributed to the economic development of countries like China and European countries. In the academe, likewise, research is vital to its development and status. Moseti (2015) emphasized in her study that "Knowledge production through research in the universities rests largely with academic staff and post graduate students, especially at the PhD level." With respect to Moseti's statement, thesis and dissertation are parts of the curriculum where students are compelled to produce research to finish their degree programs. Notably, in order to advance or sustain the HEIs' regional and national academic ranking, faculty members need to yield research output. In addition, Tan, Macdonald, & Rossi (2009) articulate that there is an increase of educational research in Singapore education institutions which can be associated with the government's credence that research enhances education institutions' performance and nations' capacity to catch-up in globalization.

## **Research Productivity Barriers**

However, not all faculty members in HEIs are engaged in doing research. Perhaps, most of them do not want to get out from their comfort zone which is teaching or could it be that research culture in universities remains at its infancy stage? Mbaleka (2015) contends that "the seven most challenging factors preventing faculty members from publishing enough or not publishing at all include having limited time, lack of training on publication, fear of rejection, lack of interest, faculty laziness, limited funds, and lack of institutional support." Despite the reluctance of faculty members in doing research, the Commission on Higher Education (CHED) in the Philippines has been serious in compelling HEIs to yield research outputs. CHED's research advocacy is best expressed in Memorandum Order No. 46 Series of 2012, Article V, which mandates universities to contribute to nation building by providing highly specialized educational experiences to train experts in the various technical and disciplinal areas and by emphasizing the development of new knowledge and skills through research and development. The focus on the development of new knowledge is articulated through emphasis on bachelor's, master's, and doctoral degree programs. Universities contribute to nation building by producing experts, knowledge and technological innovations that can serve as resources for long-term development processes in a globalized context.

In addition, according to CHED 2019 Guidelines for Granting Autonomous Status to Private Higher Education Institutions, articulates that:

At least 50 full-time faculty members or at least 30% of full-time faculty, whichever is higher must have actively engaged in research or creative work in the last five years and at least 10% full-time faculty has patents or publications in refereed journals. Of these, at least 5% of full-time faculty has publications in internationally indexed journals and/or books published in reputable academic presses in the last five (5) years.

#### **Roles of Academic Leaders**

The realization of HEI's mission and vision is dependent on the capacity and capability of their leaders. Same goes with the development of research culture where research leaders should plan and strategize on how they carry out their research goals. Succeeding literatures will attest how research leaders' role are invaluable in the development of research productivity. Thus, "Building a serious research profile does not happen without the deliberate action of executive leaders. Similarly, it is essential that all executive and senior staff actively support research development. While it needs to be led by a member of the executive, the whole task cannot be left to a one person" (Good Practice Guide: Developing Research Capacity, 2012, p. 2).

Moreover, culture of research demands institutional leaders to set lucid research goals and transmit them clearly. "The goals must be accompanied by a well-defined plan of research success evaluation as well as any accompanying changes in compensation. Administrator should also adjust job descriptions to include statement of research and teaching expectations" (Building a Culture of Research: Recommended Practices, May 2014, p. 3).

The above-mentioned condition is also synonymous to the suggestion of Goodall (2013) who states that one way to improve university ranking is by hiring the best scholars and assigning them in positions of power such as: Research Head/Director, Dean or Department Chairperson. The hired and assigned best scholars will share their wisdom and experiences in research that will contribute in the development of research culture. Further, Goodall (2013) elaborated that "who would pay any attention to a Research Director with a few research and publication telling faculty members to improve their research output." These statements attest that Research Directors/Heads play a crucial role in the development of research culture. Indeed, good research management is needed to develop research culture.

#### **METHODOLOGY**

Qualitative research was used to gather and treat data on the best practices on the management of research of the three (3) higher education institutions (HEI's). Focus group discussion is usually used in doing qualitative study in order to have leverage in a broad understanding of social phenomenon (Nyumba, Wilson, Derrick, and Mukherjee, 2018). The one-on-one interview and focus group discussions (FGDs) were conducted to hear and document the views and thoughts of the president, deans, and faculty members with respect to the management of research in their respective institutions.

#### **DISCUSSIONS OF BEST PRACTICES OF THE THREE HEIS**

In the academic community, a best practice is can be defined as a method that has been a product of research and experience to produce favorable result. It is also an established standard suitable for widespread adoption. The following are the best practices of HEIs in the management of research and statements as mentioned by the research participants. Fictitious names of the universities were used to safeguard the identity and reputation of the HEIs.

## The Aphrodite University (Fictitious name)

Aphrodite University has a humble beginning when it was established in the first decade of the 20th century by two distinguished ladies for the instruction and training of the youth in all branches of the arts and sciences. Starting with few benches, a single blackboard and a few books, the two educators gave birth to the school and steadfastly nurtured a dream of establishing a nationalistic center of learning for Filipino women. The first college, that of Pharmacy, opened in 1921 and followed by the Colleges of Liberal Arts, Education, Dentistry, and Optometry.

The Aphrodite University's research best practices are the following: Faculty Research Credit Load, Research Collaboration, Inclusion of research in faculty's performance evaluation and rankings. These research best practices were supported by the succeeding statements of the respondents:

#### Faculty research credit load

This credit load is given to faculty researchers in Aphrodite University. The Research Office as well as the Research Committee decide on credit load to be awarded to the faculty researcher. A minimum of three (3) units or one (1) subject of deload is provided to the faculty researcher, additional deload shall be given depending on the depth and scope of the study. The University President from the Aphrodite University is supportive to all research endeavors: "...giving all the support that we can give, monetary as well as, there been many, we put many areas where we give support, we give research funds, we give training, although as I said, I am not a believer in that kind of training, ahh! we give incentives to those who have done their research..." [sic]

## Research collaboration

Aphrodite University encourages faculty members not only to produce research in their respective disciplines but also through collaboration. Faculty members from this Institution are compelled to team up with other faculty members from other departments or even form other Downtown Universities in order to produce a collaborative research. One Dean shared that: "...some of my faculty members are currently under research collaboration with other Downtown Universities. Take note some are commissioned research too. Here in Aphrodite University faculty members are encouraged to do collaborative research provided that their research topics are within the University research niche (Pathogens of diseases)... I'm fine with the de-loading, they teach eight subject minus two for their de-load. They also have financial support from the University..." [sic]

Indeed, collaboration is valuable in elevating research into the next level. Sprunger (2017) underscores the significance of collaboration, 'Science is most efficient when researchers with pundits' wisdom in divergent fields collaborate on a research of intersecting interests. The intersection permits commonalties that lead toward discovery and innovation'.

#### Inclusion of research in faculty's performance evaluation and rankings

This is Aphrodite University's strategy to make faculty member conduct research. Research outputs of faculty members are given points for the higher rank, a booster in climbing academic ranking.

Another Dean disclosed: "...You want to know our secret? Aphrodite University included research in their performance evaluation and points in ranking. From then on, faculty members are obliged to do research whether they like it or not. And one of our strategies here is all my faculty members teach at least one research subject for them to be refreshed and updated in research" [sic]

Academic leaders in Aphrodite University manifest their drive in pushing and motivating their faculty members to engage in research and collaborative research. In no time, this drive of academic leaders, faculty members produce voluminous research output.

Finally, here are the considered best practices in the management of research in Aphrodite University: Faculty Research Credit Load, Research Collaboration, Inclusion of research in faculty's performance evaluation and rankings. The existence of these best practices in Aphrodite University is an indicator of a good research culture.

#### **Hermes University (Fictitious name)**

How to rise from the ashes of World War II was a major challenge for the Philippine government, business and industry, higher education institutions (HEIs), families and individuals. For a Filipino couple, they saw the deplorable condition as an opportunity to establish the first Filipino-owned air transport in the Philippines. This subsequently made the couple builds Hermes Institute of Technology to train and develop aircraft mechanics and aeronautic engineers for the maintenance and operation of their own airline and industry in the country. Certainly, Hermes is a product of a clear vision and a response to a context which later on created a niche for the University. Founded in the late 1940s, as a private educational institution to produce pilots, mechanics and maintenance professionals for the aeronautics industry, Hermes, through time, has created a curriculum package that includes the full spectrum of engineering, maritime, business, and arts courses. As an HEI, Hermes was a pioneer in aeronautical engineering and aircraft maintenance technology and was directly involved in rebuilding the workforce and engineering capability of the country.

#### External research collaboration

Deficiency in internal funds at Hermes is compensated by external funding. One of the highlights of Hermes with respect to research culture is its external research collaboration. Most research output at Hermes are products of faculty research collaboration with other HEIs and with funding support from these government agencies, the Department of Science and Technology (DOST), Commission on Higher Education (CHED), National Research Council of the Philippines (NRCP). This is a good indication of a good research orientation of faculty researchers on Hermes University. Government agencies are cautious in awarding research grants. They make sure that research fund is given to deserving researchers. Application for research grant is a competition in nature, government agency accepts and screens research proposals rigorously. Despite stringent application process of research grant from government agencies, faculty members from Hermes were able to pull it off. Well research orientation and the guidance of the Research Director are the reasons why the faculty members at Hermes have been receiving government-funded research grants. The Research Director proudly said: "What is good is that we have been having at least a few researches funded by outside agency which is DOST. To me that is a good measure of ability to do research" [sic].

#### Science and technology expo

This is Hermes University's annual research program wherein all Colleges screens, selects, and sends students nominees to showcase their research/inventions. This is the Institution's way to foster research and motivate students to conduct research. One Dean was delighted to mention about this research program: Ang natutuwa ako dito e every year meron kaming Science and Technology Expo. We exhibit researches of our students. Every year yan, mga March. Ngayon tina-tapat namin sa aming foundation day tuwing March for about 12 years na [sic]. (What is good thing here is every year we have Science and Technology Expo. We exhibit researches of our students. That's every year, usually March. We usually do that during our foundation day in March, for about 12 years already).

## Goyo (fictitious) cup

Is another major research program at Hermes. The objective of this research program is to encourage and expose the youngsters to do research. Every year high school students from Hermes' University and neighboring institutions are invited to join this competition. Chosen student representatives are gathered to exhibit their inventions. The winner gets the chance to bring home the Goyo Cup, a trophy for one year plus monetary incentive (around 3000 pesos), but if the particular department wins three consecutive years, the Goyo cup will be awarded to them for good. The Research Director said that: *In addition to that, yung mga aming junior highschool and senior highschool from our neighboring schools, about 6 to 10 of them. They also regularly exhibit. Contest yun. In fact meron kaming tinatawag na Goyo (fictitious) Cup, Juan dela Cruz (fictitious) very famous diba, so he's from Hermes yung inventor ng TV phone remember? Ang kwan dun, every year, kung sino ang nanalo ng prize siya nag kukuha ng Goyo Cup. If he gets it for three consecutive times, he gets it permanently. Aside from that we give a little monetary prize even for highschool students. I think that's research activity is very good in the university it helps develop research culture [sic]. (In addition to that, those junior high school and senior high school from our neighboring schools, about 6 to 10 of them. They also regularly exhibit. It's a contest. In fact we have what we call Goyo (fictitious) Cup. Juan dela Cruz he's very famous isn't it? so he' from Hermes, the inventor of TV phone remember? That's every year, whoever wins the prize, he/she will get the Goyo Cup. If he/she gets it for three consecutive times, he gets it permanently. Aside from that we give a little monetary prize even for high school students. I think that's research activity is very good in the university it helps develop research culture).* 

Wilkes and Jackson (2013) reported, "determined strategies suchlike weekly research and journal club meetings, with an emphasis on group activities boost research productivity. Creating Programs such as the Goyo Cup in Hermes University is an indication that the academic leaders are serious in bringing their research culture into the next level. Further, participation in research-related activities like research conferences or research exhibits (posters) can provide perks such as: to learn novelty ideas in their fields, to gain network for possible future research collaboration, and to publish a research article. In hindsight, such program serves as a major platform that entices faculty members and students to conduct research.

#### The Apollo University (Fictitious name)

Apollo University prides itself with its long tradition of academic distinction through the legacy of a prominent person in the country, as its founder. He was a prominent statesman, legislator, constitutionalist, jurist, lawyer, writer, scholar, philosopher, and above all things, a teacher. In the time of Second World War, as the leader of the nation during its darkest time in its history, he initiated educational policies, one of those policies is the accentuation of the country's nationalism by cultivating in-depth knowledge and real appreciation of the country's history and culture, which underscored and upheld national morale and

character. The inspiration to establish a school came to him in the onset of 1920's while a student at Yale University in the United States of America. A couple of decades later, along with his fellow educators, he turned this dream into a reality. With the goal of becoming a center of academic excellence in the Philippines, Apollo University formally opened to the public in early 1950s.

#### Research training

The Research and Innovation Center (RIC) in Apollo University provides the following: Trainings in Basic, Advanced, and Action Research, and Statistical Package for Social Science. Specifically in: Research Methods for Research Teachers; Formulation of Research Proposal; Data Analysis, and Preparation of Report. Conversion of Research Reports to Journal Manuscripts; Fundamentals of Journal Publication, and Writing of Report. The RIC conducts research-capability seminars twice a year to fine-tune the research skills of the faculty members. These seminars usually take place during the first and last quarter of the year.

The statements of the faculty members are testament that they enjoy the training provided by the University: Sa akin para siyang isang roller coaster kasi may mga moments na nakaka excite kasi for example may mga trainings, maeexpose ka sa mga trainings, naa update ka, may mga workshops ganun nadadagdagan kami ng knowledge. Maganda yung mga ganung klaseng experience [sic.] (For me it's like a roller coaster because there are moments that it becomes exciting, for example, there are trainings, you will be exposed to several training which gives us additional knowledge. Those are beautiful kind of experiences).

A faculty member was ecstatic in sharing his research endeavor in the University. He even used the term "roller coaster" as a metaphor to describe his research experiences. According to him doing research is just like riding a roller coaster, it's fun most especially if your vessel is on top and it becomes boring if you are at the bottom of the track. Additionally, same goes with doing research, it's fun because of the ups of doing research such as: the knowledge you learn from the research experience and the incentives provided by Apollo University. The boring or painful feeling when you are at the bottom part of the track represents the downs of doing research which happen when: the requested research budget is disapproved, when the submitted research article is rejected, and when research presentation proposal is turned down. Actually maya't maya naman sila nagpo post ng mga activities kasi meron naman kaming means of communication online. Basta may mga current for example may upcoming activity na may kinalaman sa Statistics, yung pag gamit ng stat, mga SPSS ganyan. In fairness naman pag dating sa research capabibity trainings marami naman at nakapag paparticipate naman kami" [sic.] (Actually, from time to time they (RIC) usually post activities, because we have a means of communication online. For example, there's an activity about Statistics, on how to use it, like SPSS. In fairness, when it comes to research capability trainings, we have plenty of those and we were able to participate).

Two faculty members admire the promptness of the Research Office in posting updates online regarding research updates on research capability seminar-workshop, conferences, and grant status. As a matter of fact, another faculty said: "I have good experiences in this university like attending to trainings and conferences". [sic.] The faculty members appreciate the support such as financial and mentoring support implemented by the Research Office in Apollo University.

## Research consultancy

Research Consultancy is one of the services provided by the Research Office of Apollo University. The faculty researchers in Apollo University are privileged to consult in the Research and Innovation Center (Research Office) on the following: Formulation of Research Proposal, Searching of Literature Review, Anti-plagiarism Tests, Research Design, Survey Instruments Design, Statistical Tests, Processing of Data, Interpretation of Dummy Tablets and Data, Formatting of Manuscript using APA format. Like for an instance, a faculty member who is interested in conducting research, he/she can visit the Research Office for consultation. The research personnel or the research director herself will give her some comments and suggestions on how to improve his/her research topic. Also, if a faculty is still an amateur in doing research, the research personnel will guide and orient him/her on how to search for review of related literature. During the focus group discussion, one faculty revealed: "There are a lot of activities but the thing that I can recall is the Mendeley software because I used it in graduate school. It is a research management tool, software. It's a citation tool, APA, MLA, so you do not need to memorize the format anymore" [sic.]

Once the research proposal is ready, it will be subjected to anti-plagiarism test to increase the integrity and credibility of the manuscript. The faculty members in Apollo University are required to follow the American Psychological Association (APA) citation format when applying for a research grant.

## The Innovation and Support Office (ITSO) services

Aside from research capability trainings and research consultancy, Apollo University also extends its hand by providing ITSO services (Depository of papers, documents, statistics (patent-related), Management and Commercialization of IP, Licensing Support, Patent Search, drafting, and Filing, Skills Training in Patent Search, Library for Patent Information) to its faculty researchers. For example a faculty from the engineering department has invented an equipment and has no idea whether his invention is qualified for patent or not, all he/she needs to do is to drop by in Research Office and the research personnel will assist and advise him/he on what would be the next step. The first step is patent search, it ensures that the invention of a faculty member is something novel or not. In line with this, one faculty testified: "We have research policy in place here in Apollo University. We have intellectual property policy, now we are having ethics review. Our IP policy is in place even before four years or five years ago meron na kami niyan kaya lang ini enhance pa naming" [sic.] (we already have that, but we are still enhancing it).

Thus, the administrators in Apollo University are determined in developing and sustaining their research culture by providing research programs such as: Research Training, Research Consultancy, and ITSO Services which can be considered as best practices for the development of research culture. These best practices can succor faculty members hone their research capacities which can lead towards production of knowledge through research.

The gems or the best practices that were excavated from Aphrodite, Hermes, and Apollo Universities are a concoction of research programs/activities and research policies/incentive which include: faculty research credit load, research collaboration, inclusion of research in faculty's performance evaluation and rankings, external research collaboration, Science and Technology Expo, Gregorio (fictitious) Cup, research training, research consultancy, and Innovation and Support Office (ITSO) services.

#### CONCLUSION

The three selected HEIs have unique research culture and plethora of best practices in the management of research. These best practices are in the form of research programs that are intended to develop and sustain research culture. The existence of research programs in Aphrodite, Hermes, and Apollo Universities is a manifestation of the academic leaders' great intention of transcending research culture into the upper echelon. Albeit, these best practices may not guarantee immediate improvement of research culture due to contextual facet but could dispense insights on how HEIs can modify their existing research programs which can address their respective research needs. Thus, the academic leaders and faculty members should work in unison in order to reach the next level of an ideal research culture.

#### RECOMMENDATION

In the academe, the creation of research programs is dependent on the support given by the university. The university must appoint a president who is a research-oriented and has a good track of record in research so that research activities will materialize and research budget will be prioritized. Furthermore, the university president must be a savant in running a school in order to deliver quality education and realize an ideal research culture. Additionally, the university president must have an eye in hiring academic leaders such as deans and research directors who can be a great help in cultivating research culture by creating research programs that can inspire faculty in doing research and publication. One imperative thing to take into consideration in hiring academic leaders is by looking for someone who came from an institution that has a good and strong reputation in research because this is a great chance for them to bring in tried and tested research-related best practices from their former company or institution. Deans and Research Directors must strictly hire faculty and staff members with MAs and PhDs. This strategy ensures that the hired personnel already have a decent research orientation.

In addition, Dean, research director, and faculty must have a scheduled dialogue to discuss research policies for possible enhancement and amendment. Academic leaders must relentlessly and continually devise a scheme on how to improve, amend, and sustain existing research policies. Faculty members must realize the impact of doing research not only to their career but also to the society as a whole.

Future researchers may focus on the faculty members' reason why they are hesitant in conducting research. Conduct a series of one-on-one interviews and focus group discussion focusing on the reasons of not doing research and what other possible motivation for them to take action. A qualitative study may be insufficient to conclude some ideas due to limited number of respondents but despite its limitation, whatever responses that will surface are substantive enough to know the nuances that will surely matter. As Albert Einstein once said: "Not everything that can be counted counts and not everything that counts can be counted".

## **REFERENCES**

- Building a Culture of Research: Recommended Practice (n.d) Retrieved from http://www.hanoverresearch.com/media/Building-a-Culture-of-Research-Recommended-Practices.pdf
- Chen, S. (2012). Contributing knowledge and knowledge workers: the role of Chinese universities in the knowledge economy. London Review of Education, 10(1), 101-112. https://doi.org/10.1080/14748460.2012.659062
- Commission on Higher Education (2019). Application Guidelines for the Granting of Autonomous and Deregulated Status to Private Higher Education Institutions. Retrived from https://ched.gov.ph/wp-content/uploads/2018/12/Final-Draft-2019-Application-Guidelines-for-Auto-and-Dereg\_as-of-Dec-13-2018.pdf
- Creswell, John W. (2014). Research design: Qualitative, quantitative and mixed methods approaches (4th ed.). Thousand Oaks, CA: Sage.
- Georghiou, L. (2015). *Value of research.* Retrieved from https://ec.europa.eu/research/openvision/pdf/rise/georghiou-value\_research.pdf
- Goodal, A. (2013). *Top 20 ways to improve your world university ranking*. Retrieved from https://www.timeshighereducation.com/features/top-20-ways-to-improve-your-world-university-ranking/410392.article
- Good Practice Guide: Developing Research Capacity (2012) Retrieved from http://www.usc.edu.au/media/10176277/clrd\_gpg-capacity\_lr-final.pdf
- Mbaleka, S. W. (2015). Factors leading to limited faculty publications on Philippine higher education institutions. Retrieved from https://www.researchgate.net/publication/290395664\_Factors\_Leading\_to\_Limited\_Faculty\_Publications\_in\_Philippine\_Higher\_Education\_Institutions

- Moseti, I. M. (2015). Knowledge Production through Mentorship of Next Generation Scholars: Case Study of Universities in Kenya. *African Journal of Library, Archives & Information Science*, *25*(2), 91-109.
- Nadeem, M. (2011). "Re-searching Research Culture at Higher Education." *Journal of Research and Reflections in Education*. Retrieved from http://ue.edu.pk/jrre/articles/51003.pdf
- $Nyumba, T. O., et al. (2018). \textit{ The use of focus group discussion methodology: Insights from two decades of application in conversation.} \\ Retrieved from https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/2041-210X.12860}$
- Sprunger, J.G. (2017). The benefits of engaging in collaborative research relationship. Retrieved from https://www.psychologicalscience.org/observer/the-benefits-of-engaging-in-collaborative-research-relationships
- Tan, W. K., Macdonald, D., & Rossi, T. (2009) Educational action research in Singapore: to prove or improve?, *Asia Pacific Journal of Education*, 29(3), 357-371. https://doi.org/10.1080/02188790903100333
- Wilkes, L., & Jackson, D. (2013) Enabling research cultures in nursing: insights from a multidisciplinary group of experienced researchers. *Nurse Res.*, 20(4), 28-34. https://doi.org/10.7748/nr2013.03.20.4.28.e310