Research Leadership as a Predictor of Research Competence

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Abstract

The study is designed to explore the role of research leadership as a predictor of research competence of teachers from different colleges in Technological Institute of the Philippines – Quezon City. Complete enumeration sampling was employed in the study and a total of 158 teachers participated in the study. The collection of data was made using a twenty-five-item researcher-made instrument which has an overall Cronbach's α coefficient of 0.90. The data obtained were treated using descriptive statistics and Linear Regression analysis. The results revealed that research leadership significantly predicts the research competence of the respondents.

Keywords— Research Competence, Research Leadership

I. INTRODUCTION

The role of research in educational institutions is significant for its continued improvement and sustainability. In universities, research is so crucial that it determines the quality of education and services it offers. Because the education system continues to face challenges, the conduct of research is considered to be the most useful strategy to address the issues and come up with evidence-based decisions and solutions to identified problems. However, specifically, in Higher Education Institutions (HEIs), not many have obligatory research goals for their faculty members and there are still a number of institutions that do not have adequate infrastructure to help the teachers in producing quality research. The lack of an inspiring academic environment, lack of support funds, and inadequate infrastructure continue to be some of the most apparent factors that contribute to the dismal image of research in educational institutions.

One of the most possible ways to make the conduct of research more appealing to faculty members is by strengthening research leadership. Research leadership means a lot for higher education institutions to encourage their teachers to participate in the conduct of research. It specifically refers to the support of the educational institutions to their faculty-researchers, whether tangibles or intangibles, from the research agenda to financial support, that are essential for the faculty-researchers to take an active role and participate in the conduct of research. Through excellent research leadership, educators become more actively involved in doing research so that they would be updated with the latest knowledge, information, and facts that are more fitted to the current context of classrooms rather than referring to and using textbooks or modules that were printed years ago. On one hand, research leadership prepares educators to be engaged in the conduct of research to learn up-to-date information. On the other hand, research leadership indirectly prepares and produces students who also become research-oriented because they learn from their teachers who are familiar with the importance and various aspects of doing research.

Research leadership should always be strengthened in order for the higher education institutions to progress toward quality education through research competent teachers and students. Specifically, research competence in the study refers to the capability of the educator to produce, utilize, and disseminate their research. It serves as the gauge mark for educators to sustain their quality in teaching and learning. In addition, it refers to the educator's complete knowledge in writing a research paper from the first to the last chapter based on their awareness of the research trends locally and globally.

The study seeks to find out if research leadership in a higher education institution predict the research competence of its faculty members. Because HEIs engage and invest in research that directly or indirectly contributes to their progress and continuous improvement, the role of its administrators as research leaders is crucial to bring its faculty members in the practice of doing quality and successful research works.

II. LITERATURE REVIEW

Importance of Research in Higher Education Institutions

The value of research in higher education institutions is so crucial that it becomes the reference point of the quality of education and services it offers. There is a high expectation that researches from higher education institutions are the source of new information that not only leads to important advances in education and technology but also contributes to better understanding of many issues and conditions in the society. These research works contribute to culture, technology, and society as it brings new, global, intellectual, and scientific trends. Most importantly, higher education institutions zealously push for a stronger research orientation in its faculty members as it endeavors for evidence-based policy making (Prado, 2019). The more a university conduct and complete research works, it leads to greater recognition and reputation of the institution.

Further, the conduct of research has established that the main objective of higher education institutions is not to produce learners who will soon move into a specific type of profession or career. What they do in universities is to prepare learners to live in a complex and unpredictable world. Because of a fast-paced existence of technology and innovations, education stakeholders believe that a research-intensive academic institution is an excellent center of learning because it emphasizes that quality learning needs critical inquiry, discovery, and research. Research in the various fields and industries, and most importantly in the academe, fostered a culture of inquiry and innovation. When the making of strategy, program, or policy is based on facts and data through the conduct of research, whatever output that will be developed will be useful and realistic when implemented within the institution (Amala & Ukaegbu, 2020).

Most importantly, higher education institutions, where higher education is delivered and emphasized, are expected to develop not only the students' depth of knowledge in foundational and advanced subjects, but also to acquire and develop skills for knowledge acquisition and understanding to prepare them for successful careers.

Students greatly benefit from studying in an institution that is rich with research, discovery, and innovation. Moreover, as the members of the institution are given opportunities to be involved as part of research teams, they would be able to bring back to the classroom what they have learned from their research works which are practical and (Rosowsky, 2022). There is call for higher education institutions to invest their resources not only in the usual activities or programs implemented by the school, but also to strengthen the conduct of research to for continuous improvement of all involved in the institution.

Challenges and Role of Administrators in Producing Research Competent Teachers

The call to build a stronger research culture is mostly stressed in universities. Thus, school administrators play a vital role to motivate and produce research competent teachers. A number of studies have proven that administrators give least emphasis in nurturing and reinforcing research activities. Most of the teachers and even school administrators do not have enough time to conduct studies because of the academic workload. Others report that they lack theoretical guidance or knowledge of possible research methodology that they will use, while some feel pressured in the process of doing research. The number of teaching loads, administrative duties along with academic duties that need to be performed, lack of support funds from the school, and lack of research knowledge and skills are some of the major challenges that school administrators have to address to encourage its faculty members to participate in more research works (Prado, 2019).

In the study of Kanduri (2018), the result also pointed out that the lack of funding of the education institutions was a major deterrent for teachers to come up with quality research. It was pointed out that aside from the accreditation programs in the institution, the motivation of the teachers is the largest causative factor to come up with quality research. Aside from funding and motivation, the available infrastructure to support the conduct of research was also identified as a factor for universities to produce impactful research projects.

Hameed and Al-Ani (2021) revealed that the challenges associated with research capacity in an institution includes lack of time, lack of collaborative research culture, lack of research agenda, and lack of research-focused training. Research funding was highlighted as the most significant factor aspect of support that the teachers need while lack of time was the primary challenge reported. The teachers in higher education institutions prefer a more organized and systematic professional development activities that are specifically designed for research capacity building

(Hammad & Al-Ani, 2021). While the initiative of other teachers to assist was appreciated, the role of administrators was highlighted to strengthen the research competence of the teachers.

The current situation and needs of teachers in research works call for higher education institutions to seriously take up the research leadership to encourage and motivate its teachers to participate in research activities as well as to produce and disseminate quality research (Kanduri & Suripeddi, 2018). Administrators in higher education institutions need to continue with their willingness to invest in research. More importantly, they need to remember that the educational institutions should focus on learning instead of teaching alone, to help the students find solutions to social concerns and real-life problems (Amala & Ukaegbu, 2020). In this way, the institution will greatly benefit from having research competent teachers, research-oriented learners, and research-based programs and policies that are practically applicable to its stakeholders.

III. RESEARCH METHODOLOGY

Research Design

The study used a quantitative design as it delved into the phenomena through the collection and analysis of quantitative data. Specifically, the ex post facto research design was utilized because the investigation started after the fact has occurred without interference from the researcher. In addition, it was not ethically acceptable for the researcher to apply the protocols of a true experimental research since there was no comparison groups and the research focused on the effects (Salkind, 2010).

The design was used in the study as a substitute for true experimental research as the situation to manipulate or control the independent variable was not practical and ethically acceptable. However, the design was used to test the hypothesis about cause-and-effect relationships between the variables.

Population, Sampling and Respondents

Complete enumeration sampling as a kind of purposive sampling was used as the sampling technique in the study to acquire as many data as possible and get deeper insights about the phenomenon being studied. It is a method of obtaining responses from and studying all the members of the population when the population is defined and small (Lavrakas, 2008). This technique is often used to generate reviews of experiences of particular groups within the defined population.

The researcher used complete enumeration sampling since the researcher gathered data from all the faculty members in different colleges in the Technological Institute of the Philippines – Quezon City. The respondents of the study are the faculty members from eight (8) colleges in Technological Institute of the Philippines – Quezon City. From a total of 195 teachers, there were 158 teachers that participated in the study.

Research Instrument

The research instrument used in the study was made by the researcher with the help of existing studies about research competence and leadership. The questionnaire has two parts that measure the level of competency of the respondents on the components of doing a research and to determine the research leadership of the institution as perceived by the respondents. The researcher designed the instrument to fit the existing practices and context of the population and institution being studied and it was submitted to experts for validation.

The instrument contains a total of twenty-five (25) items and two domains, namely: research competence and research leadership. Fifteen (15) items are used to determine the respondents' competence in conducting a research. On the other hand, ten (10) items measure the research leadership to assess how the respondents perceive the research leadership of the institution. The items in the first section of the instrument are rated using a four-point Likert scale ranging from "not competent" (one point), "barely competent" (two points), "moderately competent" (three points), and "highly competent" (four points) for the first section. The items in the second section are rated using a four-point Likert scale ranging from "not at all" (one point), "very little" (two points), "somewhat" (three points), and "to a great extent" (four points). The overall Cronbach's α coefficient for the tool was 0.90, while the research competence and research leadership domains had a coefficient of 0.88 and 0.85. The inter-item correlation ranged from 0.661 to 0.897, hence, no item was removed.

Data Collection and Analysis

Upon acquiring permission to gather data and securing necessary documents, the instrument was administered to the teacher-respondents. There was a total of 195 teachers but some were unable to finish the questionnaire due to unexpected circumstances. The total number of responses gathered by the researcher is from 158 teachers who completed answering the tool. After collecting the data, the researcher encoded and verified the data, and applied statistical treatment using SPSS. The researcher used SPSS version 20 to analyze the data gathered. Descriptive statistics were used to summarize the responses of the respondents in the questionnaire.

IV.   RESULTS AND DISCUSSION

Research Competence of the Respondents

Research competence refers to the ability of the teachers to conduct a research work with the use of appropriate

design, methods and analysis, and including their writing ability. Table 3 presents the summary of research competence of the respondents. It shows that the overall assessment was moderately competent with a mean of 3.07 and a standard deviation of 0.53.

Table 1: Research Competence of the Respondents

Statements	Weighted Mean	Standard Deviation	Description
Writing introduction and establishing background of the study with clear identification of research gaps.	3.02	0.67	Moderately Competent
Expounding theoretical or conceptual framework to be used.	2.99	0.63	Moderately Competent
Identifying specific research problems, objective(s) and importance of the study.	3.12	0.62	Moderately Competent
Selecting, reviewing, and synthesizing related literature and studies.	2.89	0.66	Moderately Competent
Finding relevant references and citing sources of literature reviews and studies.	3.20	0.58	Moderately Competent
Selecting appropriate research design and sampling procedure.	3.20	0.92	Moderately Competent
Constructing and validating research instrument(s).	2.38	0.69	Barely Competent
Collecting data following ethical procedures.	3.26	0.59	Highly Competent
Establishing rapport with the respondents.	3.33	0.66	Highly Competent
Proper application of different statistical treatment needed for the research.	2.97	0.70	Moderately Competent
Presenting data using tables and appropriate graphs.	3.24	0.68	Moderately Competent
Interpreting and analyzing data.	3.13	0.65	Moderately Competent
Synthesizing the results and forming conclusions.	2.49	0.64	Barely Competent
Formulating recommendations based on research findings.	3.09	0.67	Moderately Competent
Writing with no grammatical errors and thoughts coherently organized.	3.20	0.68	Moderately Competent
Overall	**3.07**	**0.53**	**Moderately Competent**

The faculty-researchers have determined themselves to be highly competent in the data collection part of doing a research, specifically, following ethical procedures and building rapport with the respondents. The teachers revealed that they are most confident when they use a validated research instrument since they believe that it has been evaluated by the experts. When communicating with the respondents, being an educator is an advantage because

they are able to gauge the respondents and connect with them. They know how to choose the right words and approach in order to make the respondents of their research comfortable and eventually gain their trust.

Table 3 also reveals that the primary weakness of the faculty-researchers is developing valid research instrument, which was then followed by synthesizing the results and forming conclusions. The respondents

described themselves as barely competent in both items. To develop a valid and reliable instrument which is among the most important factor to produce a good research, a meticulous assessment of the items is required. This will lead the researcher to be precise in data collection and get relevant results to produce a standard and acceptable research (Ahmed & Ishtiaq, 2021). The respondents pointed out that they had difficulty synthesizing the results and forming conclusions since it requires them to discuss the implications of the results of their study in a broader perspective.

Generally, the respondents believe that they are moderately competent in many aspects of doing a research, from the writing of introduction and use of theoretical or conceptual framework, to data analysis and formulating recommendations. The respondents highlighted that they were able to minimize grammatical errors in their research work through the use of free softwares that correct their sentence structure when necessary.

Research Leadership

Table 2 presents the summary of research leadership in the institution as perceived by the respondents. Overall, it can be gleaned that the research leadership in the institution

was somewhat perceived by the respondents with a mean of 3.17 and a standard deviation of 0.52.

Table 2 shows that the respondents were able to utilize the institution's research linkages and networks as well as its subscription to local and international journals for referencing and publications to a great extent. Through the institution's subscriptions, the respondents were able to access a lot of content-related materials that they can use as reference for their research.

However, the respondents reported that there is a very little opportunity for them to participate in research-related trainings initiated by the institution. Thus, they had to look for opportunities outside the institution to learn the current practices and up-to-date trends in the conduct of research. As stated by Hammad and Al-Ani (2021), there were very few professional development opportunities in higher education institutions that specifically targets developing the research skills of its teachers. The teachers prefer a systematic activity that would emphasize and focus on their specific needs in the writing of research.

Table 2: Perceived Research Leadership

Statements	Weighted Mean	Standard Deviation	Description
Subscription to local and international journals and publications for referencing and publication.	3.28	0.65	To a great extent
Provision of statistical services and tools (e.g. SPSS, MaxQDA etc.).	2.44	0.76	Very little
Provision of support for intellectual property rights.	3.01	0.69	Somewhat
Conduct of trainings relevant to doing and learning up-to-date trends in research.	2.27	0.80	Very little
Provision of language and stylistic editing, and proofreading services.	2.33	0.78	Very little
Allocation of funds for college or institutional conduct of research and publications.	2.99	0.69	Somewhat
Utilization of research in the development of institutional programs and policies.	2.48	0.65	Very little
Dissemination through publication media such as journals, magazines, newsletters, circulars and bulletins that follows locally and internationally accepted standards.	3.04	0.71	Somewhat
Provision of rewards, incentives or recognition for completed, presented or published research.	2.64	0.66	Somewhat
Offering variety of research linkages and networks.	3.35	0.64	To a great extent
Overall	**3.17**	**0.52**	**Somewhat**

In addition, the respondents pointed out the there is also a very little provision of support services from the institution for statistical analysis and use of software, and language and stylistic editing. Thus, they had to seek help from other colleges with teachers who are able to offer assistance on statistical analysis of data, as well as with language and grammar concerns. Though the institution provided seminars on the use of data analysis softwares, it was superficial for them as they were not able to identify its actual use in their research work.

Research Leadership as a Predictor of Research Competence

Table 3 shows the summary of linear regression analysis of the variables which are research competence as the

dependent variable, and research leadership as the independent variable.

The findings of the study showed a coefficient of determination (r^2) that is 16.40% and a p-value of 0.000 which leads to the rejection of the null hypothesis of the study. This means that 16.40% of the variation on research competence can be explained by research leadership. The results imply that research leadership significantly predicts the research competence of the respondents.

Table 3: Summary of Linear Regression Analysis

Variables	Mean	Std Dev	r^2	sig. value	Interpretation	Decision
Research Competence	3.07	0.53	*0.164*	*0.000*	*Significant*	*Reject Ho*
Research Leadership	3.17	0.52				

$$\alpha = 0.05$$

Research leadership is crucial for successful research in educational institutions. They play an important role in fostering a motivating and collaborative environment. Strong research leadership not only helps its teachers in the matter of research funding. They guide their teachers to navigate the weaknesses, challenges, and complexities involved in the conduct of research to reduce burdens so researchers can give more focus on their research and be more research competent (Smith, 2019). Strong research leadership includes communicating clearly to understand the challenges and demands of the teacher-researchers, encourage collaboration among teachers, lessen or manage administrative duties that free up time and attention for the teachers to focus on their research, and understand the importance of their role in the success of researchers and the success of the institution.

V. CONCLUSION

Research leadership plays an important role for the success of research works in an institution. It is essential for school administrators to understand their role as research leaders and to recognize the needs and challenges of the teachers in the conduct of research. Attendance to conferences and requiring teachers to produce research is not the best way to produce research competent teachers. As the importance of research in higher education institutions cannot be ignored, the role of school administrators as research

leaders should not be disregarded as it is crucially important to produce quality research that will benefit not only the institution, but also the society.

Based on the research evidence suggesting the need for research-focused capability building programs, it is highly recommended that the school administrators provide regular research-related training or activities to help its faculty members develop and increase their research competence. Upon identifying the areas of concern of the faculty members in doing research, the administrators should initiate institutional activities to encourage the participation of its faculty members in research-related activities. Administrators should also take into consideration funding more research-related needs and activities of its teachers to increase motivation to do research works.

The administrators and faculty members should start circulation of research works and should encourage and support the different colleges in conducting research forums or seminars to encourage utilization of results as deemed applicable in different colleges, and to keep everyone updated with the latest trends and developments in education. Teachers should make an effort to collaborate with their colleagues across the different colleges within and even outside the institution with the aim of sharing knowledge and widening their areas of expertise.

REFERENCES

[1] Ahmed, I., & Ishtiaq, S. (2021). Reliability and Validity Importance in Medical Research. Journal of the Pakistan Medical Association. doi:10.47391/JPMA.06-861

[2] Amala, P., & Ukaegbu, R. (2020). The Role of Research and Development in Higher Education. Ambit Journal of Educational Research and Reviews, 3(2), 72-76. doi:10.32619/ajerr

[3] Hammad, W., & Al-Ani, W. (2021). Building Educational Research Capacity: Challenges and Opportunities From the Perspectives of Faculty Members at a National University in Oman. SAGE Open, 11(3). doi:10.1177%2F21582440211032668

[4] Kanduri, S., & Suripeddi, R. K. (2018). A Study of Research in Higher Educational Institutions – Challenges and Implications. International Journal of Humanities, Arts and Social Sciences, 4(5), 203-212. doi:10.20469/ijhss.4.10002-5

[5] Lavrakas, P. J. (2008). Encyclopedia of Survey Research Methods (1st ed.). (P. J. Lavrakas, Ed.) SAGE Publications. Retrieved from http://dissertation.laerd.com/total-population-sampling.php

[6] Prado, N. (2019). Predictors of Research Productivity Among Administrators, Faculty, and Students. Liceo Journal of Higher Education Research, 15(2). doi:10.7828/ljher.v15i2.1319

[7] Rosowsky, D. (2022, March 2). Forbes - Education. Retrieved from Forbes: https://www.forbes.com/sites/davidrosowsky/2022/03/02/the-role-of-research-at-universities-why-it-matters/?sh=5e2de4786bd5

[8] Salkind, N. J. (2010). Encyclopedia of Research Design. Thousand Oaks, California: SAGE Publications, Inc. doi:https://dx.doi.org/10.4135/9781412961288.n145

[9] Smith, S. (2019). Research Administration: The Most Important Job No One Knows About. Baltimore, Maryland. Retrieved from http://jhir.library.jhu.edu/handle/1774.2/62358

[10] West, R. E. (2018). Sociocultural Perspectives of Learning. In R. E. West, The Past, Present, and Future of Learning and Instructional Design Technology. Pressbooks. Retrieved from http://lidtfoundations.pressbooks.com