

Research Programs in State Universities in the CALABARZON Area, Philippines

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ABSTRACT

Research is one of the four – fold functions of institutions of higher learning. It is relevant to instruction, extension and production. Relevant to this function, this study assessed the institutional research program of five state universities in the CALABARZON area, Philippines. It made use of the descriptive survey method with the bipolar rating scale questionnaire as the main instrument utilized in gathering data supplemented with interview. The respondents were composed of 59 research administrators and 158 faculty researchers. Faculty researchers are found to be mostly master's degree holder, assistant professor, regular permanent, with 17 years of teaching experience, have participated in research symposium/seminar/workshop, with seven subject teaching load, and without professional affiliation. Assessment of the institutional research agenda reveals that all seven aspects were rated positive to quite positive as to evaluation; strong to quite strong in terms of potency; and active to quite active in terms of activity. Faculty researchers have also exposed their expectations regarding research production, dissemination and utilization. The study culminated in identifying needs based on the findings on faculty profile, assessment of the institutional agenda and prospects in the institutional agenda. Utilizing these

needs, strategies to enhance research production, dissemination and utilization are proposed.

Keywords: research program, educational management, state universities, descriptive method, Philippines

INTRODUCTION

State universities and colleges in the Philippines are mandated by law to be a partner in the development of the nation's human resources through the advancement of knowledge to attain national progress. In realizing these very important mandates, research becomes one of the most vital functions of state universities together with instruction, extension and production. This is in recognition of the positive role of research in improving different aspects of society and human life. In addition, research is valuable to state universities in terms of accreditation (AACUP, 2006), attaining the center of excellence and center of development status (CMO No. 20 s.2004) and the promotion of faculty members (NCC No. 69), its most important resource. Likewise, research enriches the content and the delivery of instruction, serves as a sound basis for conducting relevant extension services and powers production initiatives.

In line with the importance of research and its role in attaining prestigious status, there is a continuous and persistent need for state universities and colleges to be aware of the status of its research program and its components.

Important as it is in many aspects of progress and development of the faculty, the university and the society as a whole, statistics reveals that only a small percentage of university faculty members are involved in research as compared to the other functions of instruction, extension and production. Research is a very personal work as the faculty who wants to conduct a research must be the one to identify the problem he is going to work on, plan how to do it, with the beginning and ending usually depending on the faculty's initiative and diligence. With this nature of research, faculty members tend to concentrate more on instruction and look at research as something that can be done later in the future. In the light of this reality, universities are posed with the challenge of involving more of its faculty in research given the very important role of research in progress development and its relationship to the functions of extension, production and instruction.

CALABARZON, also designated as Region IV – A, is the second most densely populated region in the Philippines. It is located in southwestern Luzon, just south and west of Metro Manila. Its name is a portmanteau of the names of the five provinces

that composed it which include Cavite, Laguna, Batangas, Rizal and Quezon. There is wide economic activity in the region ranging from product manufacturing, business process outsourcing, tourism, hospitality industry, services sector to agriculture and even fishery. Land development is also like never as it was before. Thus, it cannot be denied that the region contributes significantly to the growth of the Philippine national economy.

The region is also the location of five notable state universities namely Batangas State University, Cavite State University, University of Rizal System, Laguna State Polytechnic University and Southern Luzon State University. As CALABARZON gears toward enhanced industrialization and rapid development, the role of these state universities cannot be neglected. These institutions are mandated to provide quality education, develop middle and high – level manpower and intensify research and extension services to achieve equity, efficiency and high quality in their performance (Education Act of 1982). Along this line, state universities and colleges in the CALABARZON area are expected to provide quality services to its stakeholders through their quadrology of functions of instruction, research, extension and production.

Through this study, it is hoped that important data may be gathered which might help in the realization of the research goals and objectives of the state universities in the CALABARZON area. This data may also serve as valuable input in the effective management of each institution's research program. Further, it is hoped that research will be better understood and appreciated by faculty members of these state universities, and become more productive and involved in research to make them active participants in the delivery of quality education.

OBJECTIVES OF THE STUDY

The study aimed to survey the assessment of faculty researchers and administrators of state universities in the CALABARZON area about their research program which was used the basis for developing strategies for further improving research production, dissemination and utilization. Specifically, the study surveyed the profile of faculty researchers in terms of educational attainment, academic rank, status of appointment, length of service, research – related training and seminars attended, teaching load, and professional affiliations. It gathered the assessment of research administrators and faculty researchers about their institutional research programs as to goals and objectives, resources, collaboration and linkages, incentives, faculty members' research capability, output, and research production, dissemination and utilization and their responses were compared. The study also surveyed the research

priorities of SUCs involved and assessed its relevance. In addition, the study analyzed the prospects of the faculty researchers in line with the institutional research agenda. Based on the data gathered, growth areas in faculty profile and needs in research programs and prospects of faculty – researchers were identified which were used as the basis in proposing strategies for further improving research production, dissemination, and utilization.

FRAMEWORK

A university has four functions. These are instruction research, extension and production. However, the research function makes a university unique from other institutions of learning.

As complex organizations, universities and their success are affected by many factors. However, it cannot be denied that their success largely depends upon the performance of the faculty members. For the SUCs research programs, the efficiency and effectiveness of its faculty researchers and designated research heads, likewise, is a great factor determining its success. This is because the research function of the university is being carried out mainly by them. With this important function, they become one of the component that determine the quality of the university's research performance and also one of the components that radiate the productivity of the university which is gauged by its contribution to the industry and society as a whole.

A theory adopted in this study is the theory of Victor Vroom called the expectancy theory (in Robbins, 2003) which focuses on performance variables. According to the expectancy theory, the strength of a tendency to act in a certain way depends on the strength of an expectation that the act will be followed by a given outcome and the attractiveness to the individual (Robbins, 2003). In more practical terms as applied to the research functions of higher education institutions, the expectancy theory presupposes that a faculty member will be motivated to exert a high level of effort to conduct research when he or she believes that his or her effort will lead to a good performance appraisal as a researcher and a faculty. In turn, the good appraisal will lead to organizational rewards like research incentives and that the rewards will satisfy the employee's personal goals like promotion in academic rank.

Applied to this study, the expectancy theory predicts that a faculty researcher will exert a high level of effort if she or he perceives that there is a strong relationship between his research effort and performance, research performance and rewards, and rewards and satisfaction of personal goals. Each of these relationships, in turn, is influenced by certain factors. For research effort to lead to good performance, the researcher must have the requisite ability to perform or to conduct research, hence

the need for research training program to improve a faculty's capability in conducting research. Another factor is that the performance appraisal system that measures the researcher's performance must be perceived as being fair and objective that is, the researcher perceives that it is performance that is rewarded rather than other factors. This is one of the challenges that must be faced by all organizations especially higher education institutions, for research culture to permeate the environment.

This study also relies on Weisbord's (1987) theory of organization that focuses on internal issues within an organization. In this theory, Weisbord proposes six broad categories affecting the behaviour and effectiveness of an organization. These include purposes, structures, relationships, leadership, rewards, and helpful mechanisms. The purposes of an organization are the organization's mission and goals. The structures refer to the way in which the organization is organized; this may be by function – where specialists work together – or by product, program, or project – where multi-skilled teams work together. Relationships include the ways in which people and units interact and the way in which people interact with technology in their work. Rewards are the intrinsic and extrinsic rewards people received relevant to their work. Leadership refers to typical leadership tasks, including the balance between the other boxes. Finally, the helping mechanisms are the planning, controlling, budgeting, and information systems that serve to meet organizational goals.

Based on Weisbord's theory, for an organization to become more effective, it is essential that organizational members, in the case of the present study, the faculty researchers, be in agreement with and support the organization's mission and goals. Likewise, the organizational structure, reward system and helpful mechanisms like research funding and training must be assessed if effectiveness and efficiency are desired in the organization.

The research program in SUCs manifests the organization's effort and capability to contribute to the growing pool of knowledge, and that they are doing their functions to society. Thus, the management of a research program should be given importance so that the development, conduct, monitoring and dissemination would be in the proper perspective. Moreover, university faculty members have a very important role to play in the research environment that can be seen in higher education institutions. These components would have an impact on the research activities of each institution as manifested by faculty performance and the effectiveness and efficiency of the research program itself. Furthermore, as research is one among the basic functions of any higher education institution, it follows that its management should be given importance in order that the development, conduct, monitoring and dissemination are in proper perspective (Umali, et al, 2006). This is the direction that was adopted by the present study.

MATERIALS AND METHODS

This study utilized the descriptive – survey method of research. This was used by the researcher as it best responds to the need of giving a description of faculty researchers, assessment of research programs and other key concerns of the study. The respondents were composed of 59 research administrators and 158 faculty researchers with a total of 217 from five state universities in the CALABARZON, Philippines. To gather data needed in the study, a researcher – made questionnaire utilizing the semantic differential technique of Osgood (in Cooper and Schindler, 2006) was used to collect the assessments of research administrators and faculty researchers which was supplemented by interview. Document analysis was done to survey the research priorities of the state universities involved.

The researcher – made questionnaire used was subjected to reliability testing using the test – retest procedure and Pearson r. The reliability testing revealed a value of 0.85 signifying the reliability of the instrument. A bipolar rating scale of ten points in the semantic differential dimensions of evaluation, potency, and activity was utilized to gather responses of the respondents on the assessment of the institutional research program. For the interpretation of the assessments of the respondents, the intensity of their responses in the three dimensions of the semantic differential scale was interpreted following the mean ranges with their corresponding verbal interpretations as follows:

Options	Scale Ratings	Verbal Interpretations as to EPA Dimensions
10	9.10 – 10.0	Extremely Positive, Strong, Active
9	8.20 – 9.09	Highly Positive, Strong, Active
8	7.30 – 8.19	Quite Positive, Strong, Active
7	6.40 – 7.29	Positive, Strong, Active
6	5.50 – 6.39	Slightly Positive, Strong, Active
5	4.60 – 5.49	Slightly Negative, Weak, Inactive
4	3.70 – 4.59	Negative, Weak, Inactive
3	2.80 – 3.69	Quite Negative, Weak, Inactive
2	1.90 – 2.79	Highly Negative, Weak, Inactive
1	1.00 – 1.89	Extremely Negative, Weak, Inactive

The questionnaire is composed of three parts. The first part surveyed the profile of the respondent; the second part dealt with the survey of the respondents' assessments

of their institutional research program and the last part focused on faculty researchers' prospects in the institutional program.

After the approval to conduct the study was obtained, the validated questionnaire was distributed to the respondents of the study who were chosen purposively. As the assessment of the research program was included in the study, only those who were involved in research activities were selected as respondents. Frequency, percentage, ranking, weighted mean and two-tailed test of independence (t-test) were the statistical tools used to answer the problems raised in the study.

FINDINGS AND DISCUSSION

A. Profile of Respondents

For highest educational attainment, there were 90 or 56.96 per cent with Master's degree, and 34 or 21.52 per cent each with Doctorate degree and Bachelor's degree. For academic rank, it was found that 61 or 38.621 per cent are with Assistant Professor rank, 55 or 34.81 per cent are with the Instructor rank, 27 or 17.09 per cent are with Associate Professor rank, and 7 with professor rank.

For the status of appointment, there are 143 or 90.51 per cent with permanent status and 11 or 6.96 per cent on temporary appointment. For the length of service, there are 28 who have been in the service for six to ten years while 13 faculty respondents have served for 31 to 35 years and three of them for 36 years or more. With respect to seminars and trainings related to research attended, there are 110 researchers who participated in a research seminar, with 15 respondents as speaker in a research conference and there are 56 respondents or 24.05 per cent who divulged that they have not yet attended any research seminar and training.

As to teaching load, there were 52 handling eight to nine subjects per semester, 51 with six to seven subjects being handled, 26 with ten to eleven subjects being handled, 20 with two to three subjects being handled as teaching load, and 9 with four to five subjects teaching load per semester. In terms of professional affiliations, 84 respondents or 53.16 per cent claim that they are not members of any professional organization while the rest are aiming to become members in the very near future.

B. Assessment of the Institutional Research Program.

Seven aspects of the institutional research program were subjected to the assessment of the respondents and the findings are presented hereunder.

The research goals and objectives in terms of relevance, dissemination and acceptance, periodic review and assessment, and attainment with stake holders participation were rated quite positive as to evaluation by both groups of respondents with a composite mean of 8.18 for administrators and 8.02 for the faculty researchers. In terms of potency, they were rated quite strong by both groups (8.11 and 7.95) and for activity, quite active with composite mean of 8.09 and 7.87 for the two groups of respondents. Document analysis revealed that these research goals and objectives were subjected to review with the involvement of the stakeholders. These would ensure relevance of the research goals and objectives to the university, stakeholders, community and the National Higher Education Research Agenda. Likewise, the research goals and objectives are also included in their respective research handbook and manual and internet websites for effective dissemination.

With reference to research resources, these were assessed quite positive (7.41) by administrators and positive (6.82) by faculty researchers in terms of evaluation; quite strong (7.20) for administrators and strong (6.73) for faculty researchers as to potency and both evaluated research resources as active (7.24 and 6.79) as to activity. The ratings can be noted as somewhat higher for the administrators than for the faculty researchers.

Interview revealed that some respondents were aware and appreciative of the efforts of the university administration to improve research resources. They noticed improved library holdings and information and communication facilities to support research activities.

As to research collaboration and linkages, these were rated quite positive (7.65) by the administrator and positive (7.25) only by the other group as to evaluation dimension. In terms of potency, both group had it quite strong (7.67 and 7.34). Activity dimension of collaboration and linkages were graded quite active (7.65) by the first group and active (7.29) by the second group. It was noted in the review of documents and interview of the respondents that some big research projects were conducted in collaboration with faculty members from various disciplines. They had also been granted research funding by external organizations like the Department of Science and Technology and Commission on Higher Education.

Research incentives in terms of evaluation were perceived quite positive (7.46 and 7.32); in terms of potency as quite strong (7.45 and 7.45) and activity as quite active (7.46) by administrators and active (7.20) only according to faculty researchers. This means that both groups of respondents appreciate the incentives given by their university administration. Through an interview, it was surmised that some of faculty researchers received research incentives for poster or oral presentation and publication of their research.

Both two groups of respondents evaluated faculty research capability as quite positive (7.89 and 7.71), quite strong (7.79 and 7.640 and quite active (7.80 and 7.62) which manifest their high regard for the research capability of faculty members.

Assessment of research outputs as to evaluation revealed that administrators and faculty researchers both gave a rating of quite positive, with a composite mean of 7.92 and 7.76 respectively. As to potency, both groups forwarded a rating of quite strong (7.78 and 7.72 while for activity, both also evaluated research outputs as quite active with a composite mean of 7.76 and 7.74. This implies that both groups of respondents recognize their research outputs as relevant and valuable to the organization.

For research dissemination and utilization, the two groups of respondents were one in saying that the different aspects pertaining to research dissemination and utilization as to evaluation were quite positive as revealed by the composite mean of 7.71 and 7.30. As to potency, the administrators rated the different aspects of research dissemination and utilization as quite strong (7.59) while the faculty researchers rated it strong (7.22) only. As for activity, both groups rated research dissemination and utilization quite active (7.61 and 7.41). Documents gathered showed that institutional research forums were regularly conducted for research dissemination. Likewise, documents also showed that many of the respondents were able to conduct oral presentation of their research in national and international forum.

C. Comparison of Responses of Two groups of Respondents.

The assessment of the administrators and faculty researchers regarding the dimensions of institutional research programs were compared. Two-tailed test of independence was used to test the null hypothesis of no significant differences.

Table 16 presents the comparison of the assessment of administrators and faculty regarding the different dimensions of institutional research programs.

The table reveals that there was no significant difference in the assessment of administrators and faculty regarding the different dimensions of institutional research programs as to evaluation, potency, and activity.

With reference to evaluation, the seven dimensions of institutional research programs obtained computed t-values ranging from 0.577 to 1.844 which were less than the initial t-value of 1.96 at a 0.05 level of significance and at 215 degrees of freedom. It led to the acceptance of the null hypothesis. This means that the administrators and faculty members did not differ on their responses regarding the different dimensions of institutional research programs. They both observed that there were positive goals and objectives, adequacy of resources, strong collaboration

and linkages, attractive incentives, strong faculty capability, evident research output, and dissemination and utilization of research outputs were evident in the institution.

Table 16. Comparison of the assessment of administrators and faculty researchers

Dimensions	Administrators		Faculty		t_c	Interpretation
	CM	Sd	CM	Sd		
1. Goals and Objectives	8.18	1.37	8.02	1.61	0.64	Not significant
	8.11	1.38	7.95	1.65	0.62	Not significant
	8.09	1.46	7.87	1.65	0.846	Not significant
2. Resources	7.41	1.69	6.82	2.12	1.844	Not significant
	7.20	1.73	6.73	2.40	1.306	Not significant
	7.24	1.78	6.79	2.17	1.361	Not significant
3. Collaboration and Linkages	7.65	1.40	7.25	2.05	1.307	Not significant
	7.67	1.41	7.34	2.07	1.068	Not significant
	7.65	1.42	7.29	2.08	1.161	Not significant
4. Incentives	7.46	1.42	7.32	2.28	0.412	Not significant
	7.45	1.43	7.45	2.25	0	Not significant
	7.46	1.39	7.28	2.27	0.545	Not significant
5. Faculty Research Capability	7.89	1.35	7.71	1.71	0.692	Not significant
	7.79	1.50	7.64	1.82	0.536	Not significant
	7.80	1.45	7.62	1.82	0.643	Not significant
6. Output	7.92	1.41	7.77	1.71	0.577	Not significant
	7.78	1.56	7.71	1.72	0.259	Not significant
	7.76	1.55	7.73	1.72	0.111	Not significant
7. Dissemination and Utilization	7.71	1.54	7.50	1.98	1.367	Not significant
	7.57	1.58	7.22	1.98	1.167	Not significant
	7.61	1.61	7.20	2.0	1.323	Not significant

Df = 215

L = 0.05

Tabular t-value = 1.96

With reference to potency, the two groups of respondents did not differ on their responses on the different dimensions of institutional research programs. The obtained t-values ranged from 0.259 to 1.306 which were less than the initial t-value of 1.96 at 0.05 level of significance at 215 degrees of freedom. The null hypothesis was accepted. Their similarities in responding to the different items may be attributed

to the fact that they noted that the faculty members have the potentials, skills and abilities in conducting research studies. With the different dimensions of research programs, the incentives given to faculty researchers motivated more instructors/professors to submit relevant and updated research proposals. The respondents believed that the faculty members can become effective researchers. Their research outputs contribute to the improvement and better quality of instruction, extension and production.

The administrators and faculty did not differ on their assessment regarding the activities undertaken in the different dimensions of instructional research program. The computed t-values ranged from 0.111 to 1.364 which were less than the initial t-value of 1.96 at 0.05 level of significance at 215 degree of freedom. The null hypothesis was accepted. The results show that the two groups of respondents have almost the same ratings on the activities organized, implemented and undertaken by the research center in the institution.

D. Research Priorities of SUC's Involved in the Study.

There were five state universities in CALABARZON which were involved in the study, namely: Cavite State University, Laguna State Polytechnic University, Batangas State University, University of Rizal System, and Southern Luzon Polytechnic University. The research priorities in each university were in consonance with the National Higher Education Research Agenda (NHERA) and can be described as relevant and responsive. The research priorities were on agriculture, engineering and technology, science, environment, education, social sciences and business.

E. Prospects of the Faculty in the Institutional Research Agenda

Table 2 reflects the prospects of the faculty in the institutional research agenda.

Table 2. Prospects of the faculty in the institutional research agenda

ITEMS	Weighted Mean	Verbal Interpretation	Rank
To receive better research incentives	3.33	Most likely to happen	1
For every college in the university to be given higher research budget allotment	3.21	Most likely to happen	5
To source out research funds from different external organizations as budget source of their research.	3.20	Most likely to happen	6.5
To publish continuously research in a refereed journal	3.25	Most likely to happen	2
To conduct more number of interdisciplinary research projects and activities,	3.19	Most likely to happen	8.5
To have research outputs commercialized	3.11	Most likely to happen	11.5
To conduct continuously research poster presentation in national and international research forum	3.11	Most likely to happen	11.5
To conduct continuously an oral presentation of research in the regional, national forum or international forum	3.19	Most likely to happen	8.5
To be provided with additional research facilities and equipment for conducting research in science and technology	3.20	Most likely to happen	6.5
To render consultancy services to other faculty and organizations	3.09	Most likely to happen	14
To be provided with more opportunities for scholarships or fellowships	3.18	Most likely to happen	10
To participate in intensive faculty training to improve one's capability in research	3.24	More likely to happen	3
To be able to obtain exclusive intellectual property rights/patents for research/inventions/innovations	3.22	More likely to happen	4
To conduct more researches collaboratively with faculty members from other institutions	3.10	More likely to happen	13
Composite Mean	3.19	More likely to happen	

From the table, it can be seen that eleven items were perceived to be most likely to happen. Topping the list, the faculty members expect to receive better research incentives. This obtained a weighted mean of 3.33. It appears that the faculty researchers look forward to deloading, additional monetary incentives, recognition, and promotion. They believed that they will be given the opportunity to present their studies in national and international forum.

In line with the institutional research agenda, the respondents envision to publish continuously their research in a refereed journal with an obtained weighted mean of 3.25. This ranked second among 14 items. Consequently, the respondents wish that more research studies completed being reviewed by some practitioners/experts. This means that they expect the university to appropriate more budgets for the publication of their research results in refereed journals and other publications.

The respondents expected that they would be able to participate in intensive faculty training to improve their capability in research. This got a weighted mean of 3.24 and in third rank. This is a clear indication that a majority of the faculty respondents has not attended any training related to research. Thus, they expect that they will be given the opportunity to attend and participate in research training to enhance their research skills.

As indicated by the respondents, they expect to obtain exclusive intellectual property rights/patents for their research/inventions/innovations with an obtained weighted mean of 3.22. This ranked fourth in the rank order distribution. The faculty researchers want to be assured that their studies/incentives/innovations would not be duplicated. This means they believed that the intellectual property rights stipulated in the research manual of their university will protect their work.

Another important aspect that the faculty members expect to more likely to happen was the giving of higher research budget allotment for every college in the university. It obtained a weighted mean of 3.21 and ranked in fifth place. This is an indication that the faculty members look forward to the time in which each college will be given additional research budget. The respondents might have noticed that a limited number of faculty members are given the chance to attend research conferences thus, completed quality researches are not also presented in national and international forum.

There are other items that the respondents envision to happen for the university research center. One is that it will be provided with additional research facilities and equipment for conducting research in science and technology. Another is for the center to be able to source out research funds from different external organizations as budget source of their research.

In addition, the respondents also envision to conduct continuously an oral presentation of their research not only in the regional and national forum but also in the international forum as this will allow them to disseminate their research findings in wider scope. They would also like to conduct more number of interdisciplinary research projects and activities, and be provided with more opportunities for scholarships or fellowships as these two prospects will presumably improved their capability in research. Moreover, they would like to conduct continuously poster presentation of their research findings in both the national and international research forum. They are also open to the idea of conducting more researches collaboratively with faculty members from other institutions, and to have their research outputs commercialized. The obtained weighted mean ranged from 3.10 to 3.20. From the results, it can be deduced that the faculty members are interested in conducting research studies implying that they need the support of the management in giving them the opportunity to be recognized in research. They expect also to present their studies in international/national research forum.

Least noted with a weighted mean of 3.09 the respondents expect to render consultancy services to other faculty and organizations. This indicates that the faculty members want to share their knowledge and skills to others. Their ratings manifest willingness to extend assistance so that they will come-up with relevant and quality research studies.

The composite mean of 3.19 is an indication that the respondents want a more relevant, responsive and quality researches. They also believed that they would be more capable and competent of conducting quality research studies if they would be given the opportunity to attend research trainings, seminars and workshops and to help them present their work in regional, national and international forum.

F. Needs Identification and Proposed Strategies

Based on the findings of the study, growth areas and needs were identified to enhance research production, dissemination and utilization on faculty profile, different dimensions of the institutional research program and prospects of faculty in the institutional agenda. Utilizing these needs, the study culminated in designing proposed strategies to enhance research production dissemination and utilization.

A need to enhance faculty members' research performance was identified based on the highest educational attainment, involvement in the research seminar and training and professional affiliations. Based on this need, it was forwarded that a more comprehensive scholarship and vertical articulation program as well as wide – ranging research training and seminars be implemented. To address professional

affiliation, an online professional organizations network was proposed back up with membership fee subsidy.

Based on the prospects in the institutional agenda that a majority would like to have their research published, participate in research training and seminars, and obtain exclusive intellectual property rights, it was suggested among others that an enhanced research capability development program coupled with excellent research packaging scheme and strong linkage with refereed journals be institutionalized.

A need to make the research goals and objectives more responsive and relevant was identified. To address this concern, the conduct of appreciation campaign through multimedia showcase and social marketing of research goals and objectives in academic, professional and social gatherings and functions was suggested. As there is a need to provide adequate and intensive laboratory facilities and equipment for research activities, the development of research resources and infrastructure advancement program with strategic resource assessment and procurement and the development of research resources inventory software for better resource allocation and monitoring were proposed. To reinforce research collaborations and linkages with other institutions, research fellowships, benchmarking tours, multimedia research expertise showcase and research forum and seminars were recommended.

There is a need identified in the system of research incentives. In the hope of providing a sustainable enhanced and responsive research incentives, the development of faculty workload assignment software program in which research is part of faculty workload and the enrichment of research awards and incentives were suggested. It was found that there is a need to improve research outputs, thus the development of community economic, social, cultural, demographic and environmental needs scanning and monitoring system as well as the development of knowledge and innovation matrix, and research quality monitoring system were proposed.

To promote a more intensive utilization of research dissemination, universities are suggested to publish a national and international refereed research journal to support research publication of conducted works. This journal may be subjected to indexing or accreditation bodies to attest to the quality of its content or publication. Linkages and affiliations with international refereed journals should also be established to assist in attaining international quality standards.

CONCLUSIONS

The findings of the study led to the following conclusions. As to profile, it was concluded that the faculty researchers in five state universities in CALABARZON were Master's degree holder, occupying an assistant professor rank as regular permanent,

have been teaching for 17 years, participated in an institutional symposium/seminar/workshop, having a teaching load of seven subjects, and were not a member of any professional organization.

With respect to the assessment of the institutional research programs, it was concluded that the administrators and faculty assessed the institutional research program as quite positive in terms of evaluation dimension, quite strong in terms of potency dimension, and quite active as to activity dimension.

No significance difference was obtained when the responses of the two groups of respondents regarding the institutional research programs were compared.

The research conducted by faculty members in the state universities in CALABARZON conformed with NHERA's goals and priorities as to agriculture, engineering and technology, environment, services, education, social science and business.

Findings on the prospects of faculty researchers led to the conclusion that the respondents expect that they would have brighter opportunity in research, and that they would be given broad and better participation in the implementation of the institutional research agenda.

Finally, the proposed strategies entail optimum faculty preparation and increased logistical support to upgrade research production, dissemination and utilization.

RECOMMENDATIONS

From the findings and conclusions of the study, the following recommendations are forwarded.

The university management should give enhanced assistance to faculty researchers so that they will be motivated to be a member of professional organizations and participate in national and international research forum.

The proposed research intervention strategies for production and utilization sustainability may be reviewed by the research management and suggestions incorporated before adoption by the university.

A study similar to the present study may be conducted in other higher educational institutions to verify its findings.

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