

## **Research Management and Productivity: Basis for Research Policy Development Plan**



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**ABSTRACT:** This study aimed to determine the level of research management in terms of organizational structure, research guidelines, capability building, credits and incentives, linkages and extension, utilization and dissemination and the research productivity in Northern Iloilo Polytechnic State College (NIPSC) for the past three years (2015-2018) as basis for the development of the research policy plan. This study employed the descriptive-correlational method using the one-shot survey design. The respondents were the 116 purposively-selected faculty of NIPSC. Data were gathered using the validated and reliable researcher-made survey questionnaires and analyzed using the descriptive and inferential statistical tools such as Frequency Count, Mean, tests, the t-test for Independent Samples, Analysis of Variance (ANOVA), and Pearson-r. The hypotheses of the study were rejected and/or accepted at the 0.05 level of significance. The findings revealed that the level of research management in NIPSC in terms of organizational structure, research guidelines, capability building, credits and incentives, linkages and extension, utilization and dissemination was very satisfactory. The research productivity was low. Respondents who have conducted more researches have higher research productivity. No significant differences were observed in the research management when classified according to sex and number of researches but high significant differences when classified as to academic rank and marital status. Moreover, no significant differences in the research productivity when the classified according to sex, academic rank, and marital status while high significant difference were observed as to the number of research conducted. The research management was not significantly related to the research productivity. A research policy development plan to increase the research productivity of NIPSC was proposed.

**KEYWORDS:** Research Management, Productivity, Research Policy, Development Plan

### **I. INTRODUCTION**

Research is the heart of every higher education institution (HEI). State universities and colleges exert much effort to boost the productivity of faculty research to meet the ASEAN integration. The Commission on Higher Education of the Philippines envisions that all Higher Education Institutions (HEIs) in the country should develop the culture of research with a stronger research orientation and a wide-range of research output. Moreover, accrediting agency that assess the quality of institution, assures that instructions and community extensions are research-based (Panizales, 2018).

Research seems to be the most important undertakings of higher education institutions (HEIs) worldwide.

Increasingly important is the information emanating from research which is conducted in HEIs. Thus, appropriate management of researches is extremely vital for HEIs. Without effective and efficient Research Information Management (RIM) in HEIs, the benefits which are expected from research, technology, and development goals, predicted by HEIs and countries at large, cannot be easily realized. Moreover, many governments, national and international institutions also view management of research information as a paramount task for every HEI. However, not all state colleges and universities in the locality exactly working as the CHED envisions (Cango, 2012).

This study investigated the level of research management and the degree of productivity in Northern Iloilo Polytechnic State College as basis of research policy development plan. The state college is envisioning to provide information and technology for policy planning, develop multi-sectoral research approach, and promote a research-based instruction. Therefore, there is a need to determine how far the state college has achieved its vision so that policy development can be facilitated. It is observed that there is a reluctance among faculty members to conduct relevant researches. The conduct of this research identified the underlying reasons that influence the level of research management and the degree of productivity of the state college faculty in higher education institutions. The findings provided implication for the research policy development plan.

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Hence, this study aimed to determine the level of research management and the research productivity in Northern Iloilo Polytechnic

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State College (NIPSC) for the past three years (2015-2018). The findings are deemed significant in the development of the research policy plan.

### II. METHODOLOGY

#### A. Research Design

This study utilized quantitative research approach using the descriptive-correlational method.

The descriptive method was appropriate in describing the level of research management and research productivity of NIPSC.

According to Soliven, as cited by Navarro and Santos (2011), descriptive method is used to describe systematically the facts and characteristics of a given population or area of interest, factually, and accurately.

Moreover, the correlational method was employed in determining the significant relationship between the research management and research productivity. Correlation is used when the purpose is to investigate the extent to which variations in one factor correspond with variations in one or more factors based on correlation coefficient (Navarro and Santos, 2011).

#### B. Respondents of the Study

The respondents of the study were the 116 faculty members in all campuses of Northern Iloilo Polytechnic State College in Ajuy, Barotac Viejo, Batad, Concepcion, Estancia, Lemery, and Sara. The respondents were the faculty members with an academic rank of Assistant Professor I and above. They were classified as to sex (male/female), academic rank (assistant prof./associate prof.), number of research conducted (higher than 5/ 2 – 5/ 0 – 1) and marital status (single/married). Using the non-probability sampling method, the researcher purposively selected faculty members from assistant professors and up in each NIPSC campus. This group of respondents were selected because they have the full participation in the research activities of the college. They were usually involved in research, thus it is imperative to determine the level of research management and productivity from their perspectives.

#### C. Research Instrument

The research instruments used in the study were the validated and reliability tested researcher-made survey questionnaires on research management and research productivity. The research management tool is composed of the following sub-areas namely: organizational structure, research guidelines, capability building, credits and incentives, linkages and extension, and utilization and dissemination. Each area is comprised of 10 statements with five-point Likert scale options.

On the other hand, for research productivity, the tool is composed of six areas such as number of research submitted and approved, number of published researches, number of published research journal, number of intellectual properties, number of trainings and workshops attended by the faculty members, and number of trainings conducted by the research office personnel.

#### D. Data Gathering Procedure

The researcher asked permission from the College President and the Dean of the School of Education to conduct the study. Upon approval, he personally handed over the letters to the respective campus administrators and administer the researcher-made questionnaire and orient the purpose and significance of this study to the respondents for them to answer.

After which, the researcher gathered, encoded, tabulated, analyzed, and interpreted the data.

### III. RESULTS AND DISCUSSION

#### A. RESEARCH MANAGEMENT AND PRODUCTIVITY: BASIS FOR RESEARCH POLICY DEVELOPMENT PLAN

Table 1 indicates that out of 116 faculty members selected to become respondents of the study, 62.1% were female while 37.9% were males. In terms of academic rank, 63.8% were assistant professors and 36.2% were associate professors. More than half (64.7%) of the respondents have 0-1 researches conducted, 25.0% had conducted 2-5 researches while 10.3% have conducted higher than 5 researches. When classified according to marital status, 82.8% of the entire samples were married and 17.2 were still single during the conduct of the study.

**Table 1 Distribution of Respondents**

Variables	Frequency	Percentage
Entire Group	116	100
Sex		
Male	44	37.9
Female	72	62.1
Academic Rank		
Assistant Professor	74	63.8
Associate Professor	42	36.2

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No. of Researches Conducted		
Higher than 5	12	10.3
2-5	29	25.0
0-1	75	64.7
Marital Status		
Single	20	17.2
Married	96	82.8

### B. Level of research management in NIPSC in terms of organizational structure when the respondents were taken as a whole and classified according to profile.

Table 2 shows, based on the mean analysis, the research management in NIPSC in terms of organizational structure when taken as a whole was very satisfactory ( $M=4.05$ ,  $SD=.67$ ). The level of research management in terms of organizational structure when respondents were classified as to sex was very satisfactory for both male ( $M=4.00$ ,  $SD=.64$ ) and female ( $M=4.08$ ,  $SD=.69$ ). As to academic rank, a very satisfactory level of research management was also observed according to assistant professor ( $M=3.96$ ,  $SD=.69$ ) while an excellent research management was observed by associate Professors ( $M=4.22$ ,  $SD=.61$ ). Associate professors had higher observation level of the state's college management in terms of organizational structure. In terms of the number of researches conducted, an excellent research management was observed by those who had higher than five researches conducted ( $M=4.23$ ,  $SD=.61$ ). Moreover, a very satisfactory level was observed from those who had conducted 2-5 researches ( $M=4.11$ ,  $SD=.65$ ) and for those who had 0-1 ( $M=4.00$ ,  $SD=.69$ ) research conducted.

The data showed a distinct gap between respondents groups in favor to those who conducted more researches. In terms of marital status, the level of research management was very satisfactory to married respondents ( $M=4.19$ ,  $SD=.65$ ) however, satisfactory to single respondents ( $M=3.39$ ,  $SD=.26$ ).

The present results infer that the level of research management of the organization structure of NIPSC was very satisfactory to both sexes and excellent as to the observations of faculty with higher position and those who were frequently conducting researches (Table 2). Faculty members observed that there was a governing body that managed the research activities of the institution. Yet, faculty members who were single had moderate observation of the management and functions of the college personnel designated to perform research-related functions.

**Table 2. Level of Research Management in terms of Organizational Structure when Classified according to Sex, Academic Rank, Number of Researches Conducted, and Marital Status**

Research Management (Organizational Structure)	N	SD	Mean	Description
A. Entire Group	116	.67	4.05	Very Satisfactory
B. Sex				
Male	44	.64	4.00	Very Satisfactory
Female	72	.69	4.08	Very Satisfactory
C. Academic Rank				
Asst. Professor	74	.69	3.96	Very Satisfactory
Asso. Professor	42	.61	4.22	Excellent
D. No. of Researches Conducted				
Higher than 5	12	.61	4.23	Excellent
2-5	29	.65	4.11	Very Satisfactory
0-1	75	.69	4.00	Very Satisfactory
E. Marital Status				
Single	20	.26	3.39	Satisfactory
Married	96	.65	4.19	Very Satisfactory

**Note:** 4.21-5.00, Excellent; 3.41-4.20, Very Satisfactory; 2.61-3.40, Satisfactory; 1.81-2.60, Fair; 1.00-1.80, Needs Improvement

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### C. Level of research management NIPSC in terms of research guidelines when respondents were classified according to profile

Table 3 shows the Results of the mean analysis revealed that the level of research guidelines management in NIPSC was —very satisfactory ( $M=3.91$ ,  $SD=.77$ ) when taken as a whole. When the respondents were classified as to sex, male ( $M=3.86$ ,  $SD=.81$ ) and female ( $M=3.93$ ,  $SD=.75$ ) had both observed a very satisfactory level of research guidelines management. Females obtained a higher mean than male however, the responses of male were more deviated than female. In terms of academic rank, a very satisfactory level of research guidelines management was also observed by assistant professors ( $M=3.83$ ,  $SD=.74$ ) and associate professors ( $M=4.05$ ,  $SD=.81$ ). The data indicated that associate professors obtained the highest mean in this area of research management. Further, when classified according to the number of researches conducted, the research guidelines management of NIPSC was —very satisfactory when classified as to respondents with higher than 5 researches ( $M=4.05$ ,  $SD=.91$ ), with 2-5 researches ( $M=3.97$ ,  $SD=.79$ ), and with 0-1 researches ( $M=3.87$ ,  $SD=.76$ ) in favor to those with more researches conducted. In terms of marital status, a very satisfactory level was observed by married faculty members ( $M=4.04$ ,  $SD=3.31$ ) while satisfactory as to single faculty members ( $M=3.31$ ,  $SD=.27$ ).

Results also mean that NIPSC has satisfactorily established guiding principles in which the institution followed. The research guidelines were clear and understandable to all college personnel who served as end user. Format and process flow in the office were evident. The institution has also a satisfactory guidelines in terms of research grants, implementation, monitoring, publication, and award system.

**Table 3: Level of research management NIPSC in terms of research guidelines when respondents were classified according to profile**

Research Management (Research Guidelines)	N	SD	Mean	Description
A. Entire Group	116	.77	3.91	Very Satisfactory
B. Sex				
Male	44	.81	3.86	Very Satisfactory
Female	72	.75	3.93	Very Satisfactory
C. Academic Rank				
Asst. Professor	74	.74	3.83	Very Satisfactory
Asso. Professor	42	.81	4.05	Very Satisfactory
D. No. of Researches Conducted				
Higher than 5	12	.91	4.05	Very Satisfactory
2-5	29	.79	3.97	Very Satisfactory
0-1	75	.76	3.87	Very Satisfactory
E. Marital Status				
Single	20	.27	3.31	Satisfactory
Married	96	.79	4.04	Very Satisfactory

**Note:** 4.21-5.00, Excellent; 3.41-4.20, Very Satisfactory; 2.61-3.40, Satisfactory; 1.81-2.60, Fair; 1.00-1.80, Needs Improvement

### D. Level of research management in NIPSC in terms of capability building when respondents were classified according to profile

In table 4, the mean analysis showed that the research management of NIPSC on capability building was very satisfactory ( $M=3.78$ ,  $SD=.78$ ) as observed by the respondents regardless of their sex, academic rank, number of researches conducted, and marital status. However, both male and female had observed a very satisfactory capability building management ( $M=3.78$ ,  $SD=.81$ ) obtained a similar mean. Associate professors obtained a very satisfactory observation with the highest mean ( $M=3.96$ ,  $SD=.81$ ) together with assistant professors ( $M=3.68$ ,  $SD=.75$ ) as the lowest mean. When classified according to the number of researches conducted, similar description of very satisfactory was observed. The highest mean was obtained by respondents with higher than five researches conducted ( $M=4.06$ ,  $SD=.83$ ), then those with 2-5 researches ( $M=3.92$ ,  $SD=.77$ ), and with the lowest mean were those with 0-1 ( $M=3.72$ ,  $SD=.72$ ) researches conducted. In terms of marital status, the level of capability building management was very satisfactory according to married respondents ( $M=3.89$ ,  $SD=.82$ ) while satisfactory according to single respondents ( $M=3.26$ ,

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SD=.22). Yet, more deviated responses were observed from married than single status respondents.

The data analysis entails that the management of research capability building in the state college was satisfactorily done. This means that the institution has an established culture of training and development to capacitate personnel for their researcher activities. Faculty members were allowed to attend trainings, seminars and workshops and also granted scholarship grants pertaining to research. The research governing body has also conducted research consolation and assistance for their research activities. In general, there is an implication that faculty members who are single needs further capability building or the NIPSC should intensify their capability building activities.

**Table 4 Level of Research Management in terms of Capability Building when the Respondents Were Classified according to Sex, Academic Rank, Number of Researches Conducted, and Marital Status**

Research Management (Capability Building)	N	SD	Mean	Description
A. Entire Group	116	.78	3.78	Very Satisfactory
B. Sex				
Male	44	.81	3.78	Very Satisfactory
Female	72	.78	3.78	Very Satisfactory
C. Academic Rank				
Asst. Professor	74	.75	3.68	Very Satisfactory
Asso. Professor	42	.81	3.96	Very Satisfactory
D. No. of Researches Conducted				
Higher than 5	12	.83	4.06	Very Satisfactory
2-5	29	.77	3.92	Very Satisfactory
0-1	75	.78	3.72	Very Satisfactory
E. Marital Status				
Single	20	.22	3.26	Satisfactory
Married	96	.82	3.89	Very Satisfactory

**Note:** 4.21-5.00, Excellent; 3.41-4.20, Very Satisfactory; 2.61-3.40, Satisfactory; 1.81-2.60, Fair; 1.00-1.80, Needs Improvement

### E. Level of research management in terms of credits and incentives when the respondents were classified according to profile

In table 5, shows the results of the mean analysis on the level of research management in terms of credits and incentives were very satisfactory ( $M=3.70$ ,  $SD=.85$ ) when taken as a whole group. Male ( $M=3.69$ ,  $SD=.91$ ) and female ( $M=3.71$ ,  $SD=.81$ ) had a very satisfactory observations. Likewise, associate professor got the highest mean ( $M=3.97$ ,  $SD=.84$ ) while assistant professors ( $M=3.55$ ,  $SD=.83$ ) got a lower mean but both with very satisfactory observation. When classified according to the number of research conducted, the level of managing credits and incentives was very satisfactory among respondents with higher than 5 researches ( $M=3.97$ ,  $SD=.96$ ), with 2-5 researches ( $M=3.70$ ,  $SD=.82$ ), and with 0-1 researches ( $M=3.66$ ,  $SD=.84$ ). The result showed that respondents' group with lower number of researches got also a lower mean on this area of research. Moreover, when classified according to marital status, married respondents ( $M=3.80$ ,  $SD=.33$ ) observed a very satisfactory level of managing research credits and incentives while single ( $M=3.24$ ,  $SD=.33$ ) have satisfactory observation on management of credits and incentives. The data also indicated that the responses from married respondents were deviated from one another.

The present study showed a very satisfactory management on credits and incentives with the exclusion of respondents with single status. Results denote that the management of credits and incentives in NIPSC was very satisfactorily done according to respondents who are male and female, with high and low academic rank, and with more or less researches conducted. This means that the institution has a policy for the provision of the credits and incentives to those who were involved in the research and development activities. It was also agreed by the respondents that their research involvement was given due credits. There was also a very satisfactory management of the awards system for outstanding research outputs and activities. Moreover, this result entails that married life and the number of children of the faculty do not affect the awareness and involvement to research activities of the faculty members of NIPSC.

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**Table 5 Level of Research Management in terms of Credits and Incentives when the Respondents were Classified according to Sex, Academic Rank, Number of Researches Conducted, and Marital Status**

Research Management (Credits and Incentives)		SD	Mean	Description
A. Entire Group	116	.85	3.70	Very Satisfactory
B. Sex				
Male	44	.91	3.69	Very Satisfactory
Female	72	.81	3.71	Very Satisfactory
C. Academic Rank				
Asst. Professor	74	.83	3.55	Very Satisfactory
Asso. Professor	42	.82	3.97	Very Satisfactory
D. No. of Researches Conducted				
Higher than 5	12	.96	3.97	Very Satisfactory
2-5	29	.82	3.70	Very Satisfactory
0-1	75	.84	3.66	Very Satisfactory
E. Marital Status				
Single	20	.33	3.24	Satisfactory
Married	96	.89	3.80	Very Satisfactory

**Note:** 4.21-5.00, Excellent; 3.41-4.20, Very Satisfactory; 2.61-3.40, Satisfactory; 1.81-2.60, Fair; 1.00-1.80, Needs Improvement

### F. Level of research management in terms of linkages and extension when the respondents were classified according to profile

In table 6, shows the level of research management in NIPSC in terms of linkages and extension, based on the mean analysis, was very satisfactory as a whole ( $M=3.85$ ,  $SD=.79$ ) when classified as to male ( $M=3.84$ ,  $SD=.85$ ) and female ( $M=3.86$ ,  $SD=.76$ ). Their means were almost comparable with one another.

In terms of academic rank, a very satisfactory level was also obtained. Associate professors got the highest mean ( $M=4.06$ ,  $SD=.69$ ) and assistant professors ( $M=3.74$ ,  $SD=.82$ ), as the least.

In terms of the number of researches conducted, a very satisfactory linkages and extension level was also observed in the result. Respondents with 2-5 researches ( $M=3.91$ ,  $SD=.81$ ) and those with 0-1 researches ( $M=3.84$ ,  $SD=.78$ ) were more satisfied of the linkages and extension services of the state college than with higher than five researches ( $M=3.79$ ,  $SD=.84$ ). When classified according to marital status, single ( $M=3.30$ ,  $SD=.30$ ) respondents were satisfactory of the research management while married ( $M=3.97$ ,  $SD=.81$ ) has a very satisfactory level of observation.

The results indicate that associate professors and those with few researches conducted were more aware of the linkages and extension services of the research and development activities in NIPSC. This may be due to their involvement as core facilitators of the research activities.

Likewise, in the preceding areas of research management, marital status differed the observation of faculty members to the level of linkages and extension management. It showed that unmarried faculty were not thoroughly involved or aware of the linkages and extension services of NIPSC.

**Table 6. Level of research management in terms of linkages and extension when the respondents were classified according to profile**

Research Management (Linkages and Extension)	N	SD	Mean	Description
A. Entire Group	116	.79	3.85	Very Satisfactory
B. Sex				

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Male	44	.85	3.84	Very Satisfactory
Female	72	.76	3.86	Very Satisfactory
C. Academic Rank				
Asst. Professor	74	.82	3.74	Very Satisfactory
Asso. Professor	42	.68	4.06	Very Satisfactory
D. No. of Researches Conducted				
Higher than 5	12	.84	3.79	Very Satisfactory
2-5	29	.81	3.91	Very Satisfactory
0-1	75	.78	3.84	Very Satisfactory
E. Marital Status				
Single	20	.30	3.30	Satisfactory
Married	96	.81	3.97	Very Satisfactory

**Note:** 4.21-5.00, Excellent; 3.41-4.20, Very Satisfactory; 2.61-3.40, Satisfactory; 1.81-2.60, Fair; 1.00-1.80, Needs Improvement

### G. Level of research in terms of utilization and dissemination when the respondents were classified according to profile

In table 7, shows the mean analysis showed that the respondents in NIPSC revealed a very satisfactory level of research management in terms of utilization and dissemination when respondents were taken as a whole ( $M=3.82$ ,  $SD=.78$ ). When classified according to sex, academic rank, number of researches conducted, and marital status. Male got a slightly higher mean ( $M=3.83$ ,  $SD=.78$ ) than female ( $M=3.81$ ,  $SD=.79$ ), associate professors ( $M=4.06$ ,  $SD=.74$ ) agreed to a more satisfactory level of utilization and dissemination than assistant professors ( $M=3.60$ ,  $SD=.56$ ), a very satisfactory level was observed from those with 2-5 researches ( $M=3.96$ ,  $SD=.73$ ), higher than 5 researches conducted ( $M=3.89$ ,  $SD=.84$ ), and 0-1 researches ( $M=3.75$ ,  $SD=.79$ ) and married respondents observed a very satisfactory level of utilization and dissemination of researches ( $M=3.92$ ,  $SD=.81$ ) whereas, those who are single ( $M=3.34$ ,  $SD=.26$ ) observed a satisfactory level. Results imply that regardless of respondents' profile, the research management of NIPSC, in terms of utilization and dissemination, was agreeable among faculty members. However, marital status cause deviation on the level of this research management. It has an implication that NIPSC was active on disseminating research outputs at any platform and audiences. NIPSC led on providing a research-based technology and policy enhancement as a result of this activity.

**Table 7 Level of research in terms of utilization and dissemination when the respondents were classified according to profile**

Research Management (Utilization and Dissemination)		SD	Mean	Description
A. Entire Group	116	.78	3.82	Very Satisfactory
B. Sex				
Male	44	.78	3.83	Very Satisfactory
Female	72	.79	3.81	Very Satisfactory
C. Academic Rank				
Asst. Professor	74	.77	3.69	Very Satisfactory
Asso. Professor	42	.74	4.04	Very Satisfactory
D. No. of Researches Conducted				
Higher than 5	12	.84	3.89	Very Satisfactory
2-5	29	.73	3.96	Very Satisfactory
0-1	75	.79	3.75	Very Satisfactory
E. Marital Status				
Single	20	.26	3.34	Satisfactory
Married	96	.81	3.92	Very Satisfactory

**Note:** 4.21-5.00, Excellent; 3.41-4.20, Very Satisfactory; 2.61-3.40, Satisfactory; 1.81-2.60, Fair; 1.00-1.80 Needs Improvement

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### H. Research productivity in NIPSC when the respondents were classified according to profile, sex, academic rank and number of researches conducted

In table 8, shows the mean analysis of the research productivity when the respondents were taken as a whole was low ( $M=1.30$ ,  $SD=.56$ ). When classified according to sex, male ( $M=1.25$ ,  $SD=.49$ ) and female ( $M=1.33$ ,  $SD=.61$ ) have low productivity however, female obtained a higher mean than male. When classified according to academic rank, both associate professors ( $M=1.43$ ,  $SD=.70$ ) and assistant professors ( $M=1.23$ ,  $SD=.45$ ) have low research productivity. In terms of the number of research conducted, an average research productivity was observed to those with higher than 5 researches conducted ( $M=2.17$ ,  $SD=.83$ ) while low productivity to those with 2-5 researches ( $M=1.52$ ,  $SD=.51$ ) and ( $M=1.08$ ,  $SD=.32$ ). Though this was an obvious concept, this implies that the more researches the faculty conducted, the more they were engaged and involved in other research-related activities. As to marital status, both single and married respondents have low productivity ( $M=1.30$ ,  $SD=.47$  and  $M=1.30$ ,  $SD=.58$ ).

**Table 8. Research productivity in NIPSC when the respondents were classified according to profile, sex, academic rank and number of researches conducted**

Research Management	N	SD	Mean	Description
A. Entire Group	116	.56	1.30	Low
B. Sex				
Male	44	.49	1.25	Low
Female	72	.61	1.33	Low
C. Academic Rank				
Asst. Professor	74	.45	1.23	Low
Asso. Professor	42	.70	1.43	Low
D. No. of Researches Conducted				
Higher than 5	12	.83	2.17	Average
2-5	29	.51	1.52	Low
0-1	75	.32	1.08	Low
E. Marital Status				
Single	20	.47	1.30	Low
Married	96	.58	1.30	Low

**Note:** 2.33-3.00 –High; 1.67-2.32 –Average; and 1.00-1.66-Low

### I. Differences in the research management of NIPSC when the respondents were classified according to sex

In table 9, shows the results of the t-test for independent sample analysis revealed no significant differences in the research management of NIPSC between male and female respondents in terms of organizational structure ( $p=.511>.05$ ,  $eta=.004$ ), research guidelines ( $p=.696>.05$ ,  $eta=.001$ ), capability building ( $p=.962>.05$ ), credits and incentives ( $p=.940>.05$ ), linkages and extension ( $p=.868>.05$ ), and utilization and dissemination ( $p=.944>.05$ ). The eta-value of .004 for organizational structure, .001 for research guidelines, and .000 for capability building, credits and incentives, linkages and extension, and utilization and dissemination respectively showed that there were small effects on the difference between groups.

The hypothesis of the study which states that there was no significant difference in the research management when the respondents were classified as to sex was accepted at the 0.05 level of significance. This result implies that male and female faculty members have similar level of observations of the research management in NIPSC throughout all areas of management.

**Table 9 Differences in the research management of NIPSC when the respondents were classified according to sex**

Variables	Mean	SD	t	df	p-value		
Organizational Structure							
Male	4.00	44	.64	-.659	114	.511	.004
Female	4.08	72	.69				
Research Guidelines							



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Male	3.88	44	.81	-.392	114	.696	.001
Female	3.93	72	.76				
Capability Building							
Male	3.78	44	.81	-.047	114	.962	.000
Female	3.78	72	.78				
Credits and Incentives							
Male	3.69	44	.91	-.076	114	.940	.000
Female	3.71	72	.81				
Linkages and Extension							
Male	3.84	44	.84	-.167	114	.868	.000
Female	3.86	72	.76				
Utilization and Dissemination							
Male	3.82	44	.78	.070	114	.944	.000
Female	3.81	72	.79				

Note:  $P > 0.05$  not sig. at 0.05 alpha

### J. Differences in the research management of NIPSC when the respondents were classified according to academic rank

In table 10, shows the results of the t-test for Independent Sample revealed that there were significant differences in the research management of NIPSC in terms of organizational structure ( $p=.040<.05$ ), credits and incentives ( $p=.010<.05$ ), linkages and extension, utilization ( $p=.034<.05$ ), and dissemination and utilization ( $p=.018<.05$ ) while no significant differences were observed in terms of research guidelines ( $p=.140>.05$ ) and capability building ( $p=.062>.05$ ). The eta-value of .036 for organizational structure, .056 for credits and incentives, .039 for linkages and extension, and .048 for utilization and dissemination indicated a big effect on the difference of research management which further suggests a different observations between groups of respondents.

The null hypothesis which states that there is no significant difference in the research management when the respondents were classified as to academic rank was rejected. This implies that assistant and associate professors have viewed research management in NIPSC in different levels.

**Table 10.** Differences in the Research Management of NIPSC when the Respondents were classified according to Academic Rank

Variables	Mean	SD	t	Df	p-value	(eta) <sup>2</sup>	
Organizational Structure							
Asst. Prof	3.96	74	.63854	-2.074	114	.040*	.036
Asso. Prof	4.22	42	.72987				
Research Guidelines							
Asst. Prof	3.83	74	.68692	-1.485	114	.140	.019
Asso. Prof	4.05	42	.69391				
Capability Building							
Asst. Prof	3.68	74	.75265	-1.888	114	.062	.030
Asso. Prof	3.96	42	.85933				
Credits & Incentives							
Asst. Prof	3.55	74	.84372	-2.606	114	.010*	.056
Asso. Prof	3.97	42	.86639				
Linkages & Extension							
Asst. Prof	3.74	74	.76576	-2.146	114	.034*	.039
Asso. Prof	4.06	42	.83242				
Utilization & Dissemination							
Asst. Prof	3.69	74	.73660	-2.395	114	.018*	.048

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Asso. Prof                      4.04                      42                      .85825

\*p < 0.05 sig. at 0.05 alpha

### K. Differences on the research management of NIPSC when the respondents were classified according to number of researches conducted

In table 11, the Analysis of Variance result showed that there were no significant differences in the research management of NIPSC when the respondents were classified according to the number of researches conducted in terms organizational structure ( $p=.481>.05$ ), research guidelines ( $p=.676>.05$ ), capability building ( $p=.350>.05$ ), credits and incentives ( $p=.512>.05$ ), linkages and extension ( $p=.879>.05$ ), and utilization and dissemination ( $p=.451>.05$ ). The eta values also showed a very small effect on the difference of groups in terms of researches conducted. Therefore, the null hypothesis of the study which states that there is no significant difference in the research management level when classified as to number of research conducted was accepted.

This analysis indicates that the research management of the respondents with more researches conducted was comparable to those with less researches. Hence, the research management in NIPSC was not influenced by the number of researches conducted by the faculty.

**Table 11. Differences on the research management of NIPSC when the respondents were classified according to number of researches conducted**

Variables	Sum of		Mean		p-	
	Squares	Df	Square	F	value	(eta) <sup>2</sup>
<b>Organizational Structure</b>						
Between Groups	.664	2	.332	.737	.481	.01
Within Groups	50.945	113	.451			
<b>Research Guidelines</b>						
Between Groups	.477	2	.238	.392	.676	.01
Within Groups	68.639	113	.607			
<b>Capability Building</b>						
Between Groups	1.303	2	.652	1.059	.350	.02
Within Groups	69.536	113	.615			
<b>Credits &amp; Incentives</b>						
Between Groups	.974	2	.487	.673	.512	.01
Within Groups	81.776	113	.724			
<b>Linkages &amp; Extension</b>						
Between Groups	.162	2	.081	.129	.879	.00
Within Groups	71.266	113	.631			
<b>Utilization &amp; Dissemination</b>						
Between Groups	.978	2	.489	.802	.451	.01
Within Groups	68.888	113	.610			

**Note:** p > 0.05 not sig. at 0.05 alpha

### L. Differences on the research management when the respondents were classified according to marital status

In table 12, the results of the t-test analysis showed a high significant difference between the research management of single and married respondents in terms of organizational structure ( $p=.000>.05$ ), research guidelines ( $p=.000>.05$ ), capability building ( $p=.001>.05$ ), credits and incentives ( $p=.007>.05$ ), linkages and extension ( $p=.000>.05$ ), and utilization and dissemination ( $p=.002>.05$ ). These values were supported by the eta values of .21, .13, .09, .06, .10, and .08, respectively. The preceding eta values proved that there was a moderate to large effect on the differences between groups. Therefore, the null hypothesis of the study which

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states that there is no significant difference in the research management was rejected. This result signifies that single and married faculty members had varied observations on the research management in NIPSC.

**Table 12. Differences on the research management when the respondents were classified according to marital status**

Variables	Mean	SD	T	df	p-value	(eta) <sup>2</sup>	
Organizational Structure							
Single	3.3900	20	.26537	-5.431	114	.000	.21
Married	4.1906	96	.64613				
Research Guidelines							
Single	3.3100	20	.27319	-4.061	114	.000	.13
Married	4.0365	96	.78782				
Capability Building							
Single	3.2556	20	.21957	-3.434	114	.001	.09
Married	3.8889	96	.81618				
Credits & Incentives							
Single	3.2400	20	.32991	-2.746	114	.007	.06
Married	3.7969	96	.89177				
Linkages & Extension							
Single	3.3000	20	.29736	-3.637	114	.000	.10
Married	3.9698	96	.80995				
Utilization & Dissemination							
Single	3.3450	20	.26453	-3.096	114	.002	.08
Married	3.9171	96	.81511				

**Note:**  $p < 0.01$  significant at 0.01 alpha

### M. Differences on the research productivity of NIPSC when the respondents were classified according to sex, academic performance, and marital status

In table 13, shows that based on the analysis of t-test for Independent Samples, there were no significant differences observed between the research productivity of male and female ( $p=.442>.05$ ), assistant and associate professors ( $p=.067>.05$ ), and marital status ( $p=.988>.05$ ). The eta-values of .01, .03, and .00 showed a very small effect on the variables' differences. Thus, the null hypothesis which states that there is no significant difference in the research management was accepted.

Results suggest that the respondents have similar productivity in the last three years. Their sex, academic rank, and marital status did not influence their research productivity.

**Table 13. Differences on the research productivity of NIPSC when the respondents were classified according to sex, academic performance, and marital status**

Variables	Mean	SD	T	df	p-value	(eta) <sup>2</sup>	
Sex							
Male	1.25	44	.48	.772	114	.442	.01
Female	1.33	72	.60				
Academic Rank							
Asst. Prof	1.23	74	.45	1.848	114	.067	.03
Asso. Prof	1.43	42	.70				
Marital Status							
Single	1.30	20	.47	.015	14	.988	.00

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Married 1.30 96 .58

Note:  $P > 0.05$  not sig. at 0.05 alpha

### N. Differences on the research productivity when the respondents were classified according to number of researches conducted

In table 14, the Analysis of Variance showed a high significant difference ( $p=.000<.05$ ) between the research productivity of the respondents with higher than 5, 2-5, and 0-1 researches conducted. Hence, the null hypothesis which states that there is no significant difference in the research productivity of NIPSC when the respondents are classified according to the number of researches conducted was rejected. It was proven that significant difference existed when respondents were classified according to the number of researches conducted.

This result implies that there was a specific productivity reflected for each group of respondents. Respondents who conducted more researches were more productive than those with less researches. This means that the more they conduct research works, the higher the opportunity of engaging more on other related research activities that may increase their research productivity.

**Table 14. Differences on the research productivity when the respondents were classified according to number of researches conducted**

Variables	Sum of		Mean		p-value	(eta) <sup>2</sup>
	Squares	df	Square	f		
No. of research Conducted						
Between Groups	14.012	2	7.006	35.298	.000*	.62
Within Groups	22.428	113	.198			

Note: \* $p < 0.01$  significant at 0.01 alpha

### O. Post-hoc Test differences between the research productivity when the respondents were classified according to number of researches conducted

In table 15, the Scheffe test showed that high significant differences were observed across all groups ( $p=.000<.05$ ). This means that the productivity of each group of respondents differed from one another. Moreover, the research productivity of those with higher than five researches conducted were too different from those with 2-5 and those with 0-1 researches conducted. This implies that the number of researches they have conducted signified their productivity in research. The quantity of productivity for each group for the past three years was very distinct and this cause the differences. This result also implies that the research productivity of NIPSC relied on the quantity of researches conducted by the faculty.

**Table 15. Post-hoc Test differences between the research productivity when the respondents were classified according to number of researches conducted**

No. of Research Conducted		Mean Dif.	Std Error	p
Higher than 5	2-5	.649	.153	.000
	0-1	1.086	.138	.000
2-5	0-1	.437	.097	.000

Note: \* $P < 0.01$  sig. at 0.01 alpha

### P. Relationships between the research management and research productivity in NIPSC

The Product Moment Correlation Coefficient or Pearson-r analysis confirmed that there were no significant relationships existed between research productivity and research management in NIPSC in terms of organizational structure ( $r=.004, p=.969$ ), research guidelines ( $r=.030, p=.751$ ), capability building ( $r=.019, p=.841$ ), credits and incentives ( $r=.003, p=.974$ ), linkages and extension ( $r=.067, p=.477$ ), and utilization and dissemination ( $r=.009, p=.925$ ). Noticeably, the r-value on each analysis showed a negligible correlation.

With this result the null hypothesis of the study which states that there is a significant relationship between the research

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management and productivity was accepted because it was proven that research management is not related to research productivity. This findings showed that the research management and productivity were not related. Any increase in the level of research management cannot be directly attributed to the increase of research productivity. In the case of NIPSC, the level of research management observed by the faculty members could or could not be a reason to engage them into research. None of the research management areas involved could be associated to their research productivity.

**Table 16. Relationships between the research management and research productivity in NIPSC**

Level of Research Management		Research Productivity
Research Productivity	Pearson r	1
	Sig. (2-tailed)	
	N	116
Organizational Structure	Pearson r	.004
	Sig. (2-tailed)	.969
	N	116
Research Guidelines	Pearson r	-.030
	Sig. (2-tailed)	.751
	N	116
Capability Building	Pearson r	-.019
	Sig. (2-tailed)	.841
	N	116
Credits and Incentives	Pearson r	.003
	Sig. (2-tailed)	.974
	N	116
Linkages and Extension	Pearson r	-.067
	Sig. (2-tailed)	.477
	N	116
Utilization and Dissemination	Pearson r	-.009
	Sig. (2-tailed)	.925
	N	116

**Note:**  $P > 0.05$  is not significant at the 0.05 level (2-tailed)

## IV. CONCLUSION

### The following conclusions were drawn based on the findings of the study:

Faculty members who were single have lower satisfaction on the research management of NIPSC. This may infer that they were not considerably involved on the research activities of NIPSC. They were not fully aware of the organizational structure, guidelines, capability building, linkages and extension activities, and utilization and disseminations of research outputs. There was a low research productivity in NIPSC due to low contribution and involvement of faculty members to research activities in the past three years. The result suggests that there was an average of one research output done by faculty members for the past three years.

The research management in NIPSC was observed similarly by respondents regardless of their sex and number of research conducted. Married and associate professors have different observations on the research management of NIPSC than single and assistant professors.

The sex, academic rank, and marital status of the respondents did not influence their research productivity in NIPSC. Similar level of research productivity was observed among these groups. Faculty members who were conducting more researches were more productive on research.

The level of research productivity of the faculty members was not influenced by the level of research management. The low level of research productivity in NIPSC was not associated with the research management level of the institution. Although NIPSC has a satisfactory management this cannot be attributed to a higher research productivity.

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The proposed research policy development plan based on the findings of the present study implies that NIPSC has to impose tangible policies to engage faculty members to research activities and therefore increase their research outputs.

### V. RECOMMENDATIONS

#### These recommendations are made based on the conclusions mentioned:

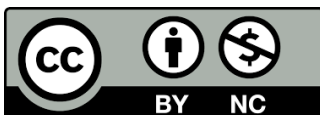
The Research and Development office may conduct research activities that involve and encourage all faculty members to participate. The awareness level of the state college regarding the programs and projects of the research development office should be increased. The Research and Development plan of NIPSC may be subjected for review and evaluation to update the implementation status and accomplishments. Faculty members should be involved in the research activities and processes of NIPSC to improve the research management level. Appropriate personeling and delegation of tasks could increase research involvement and awareness. Research guidelines should be enhanced and the provisions of credits and incentives to the faculty members should be improved. The research management system of NIPSC through the collaboration of the faculty and staff, as end users of the programs and projects of the office, should be improved to increase research productivity to some extent. Though this was not proven in this study, establishing a clear and comprehensive guidelines and a strict implementation can facilitate productivity. The proposed research policy development plan, which aims to increase research productivity, is recommended for review and implementation.

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