

# INSTITUTIONAL RESEARCH CAPABILITY AND PERFORMANCE OF THE UNIVERSITY OF NORTHERN PHILIPPINES

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## ABSTRACT

Today, research institutions operate in the context of a global market. International, national and regional comparisons or rankings of institutions are published with the aim of informing everyone knowledge-seeking external groups about their quality. This study aimed to determine the institutional research capability and performance of the University of Northern Philippines. The descriptive-qualitative methods coupled with regression analysis were used in this study. The respondents were the administrators, and faculty of the University who conducted researches from 2010 to 2015.

Results showed that a substantial percentage of the respondents are aged 50-59, teaching from 11-20 years, Assistant Professors and members of NRCP, IAMURE and PAIR. The majority are females, married and Master's degree holders, never attended research related training, but a great percentage are awarded as Best Oral Presenters. The respondents' group consciousness is fair. The implementation of research program, and the capability and performance of the UNP are Very High, however, the perceived outcome of the researches conducted in the community is high only. The research capability and performance of UNP is significantly influenced by the group consciousness and sex of the respondents.

**Keywords:** group consciousness, management practices, group identification, polar effect and polar power

## Introduction

Improvement of the human life requires vital consideration and concentration to researches that generate awareness, realization, and strategies. Research is also a meaningful, productive and helpful activity that can help in solving economic, political and social problems.

The 1987 Philippine Constitution. Article XIV, section 10 mandated that the state shall give priority to research developments, invention and innovation, and even long before the ratification of the 1987 Constitution, Presidential Decree 6-a (1972) had already identified research as a main goal of Philippine Education. Moreover, the Education Act of 1994 otherwise known as the Republic Act No. 7722 created the

Commission on Higher Education (CHED) which mandated the advancement of learning and research by formulating and recommending plans, policies, priorities, and programs. Its National Higher Education Research Agenda formulated in 1996 articulates the goals of higher education research as well as the mechanics and concrete steps for achieving this goal.

The UNESCO World Declaration on Higher Education for the Twenty-first Century acknowledges that knowledge creation, transmission, and application are the lifeblood of the knowledge-based economy. Higher education institutions are among the primary entities tasked to generate, transmit, disseminate and apply knowledge. They are thus a major component of the nation's research and innovation system. Moreover, from the perspective of education, vigorous and high quality research underpins and nourishes degree-level learning environments, especially for graduate and post-graduate programs; it provides the inquiring, critical and independent regimen that develops intellectual capability and advances the boundaries of knowledge and understanding. (AACCUP, 2005).

Recognizing research as one of the major functions of higher education institutions, administrators, and faculty members have consistently contributed to research productivity. On the other hand, universities and colleges in the developing world have retained effective teaching functions and weak research functions (Sanyal and Vaghese, 2006).

A study on the status of research of higher education institutions showed a low turnout. Among these studies, those conducted by individuals (72%) far exceeded collaborative and institutional research. Graduate students conducted about 69% individual studies as part of their degree requirement. Despite the CHED initiatives, the current state of higher education research in the Philippines leaves much to be desired regarding quantity, quality, thrusts, and contribution to national development (Salazar, 2006).

In the past, teaching was about the only criterion used to determine whether a university was doing its task well or not. Today, universities are also expected to be centers of creating new knowledge through research. Indeed, this is the criterion in

gauging a Higher Education Institution (HEI) as a center of excellence. In the article entitled Measuring University Performance Series (1996), Valisno (2002) expresses that research corresponds to one of the university's most important outputs. The contribution of faculty, staff and students makes the progression of discovery during their academic endeavors at the institution.

There are only few considered research universities or institutions. The Philippine Universities are lagging behind other Asian countries. Using research outputs as one of the bases of the ranking, only five of the country's universities, led by the University of the Philippines (UP), made it in the 2017 list of top 300 Asian universities ranked by Quacquarelli Symonds (QS). This was the lowest number of Philippine universities that were included in the Asian ranking since 2009 (Inquirer, 2017).

Jaffe (1996) presented a study that asserts the United States, a technologically-developed country, has a rapid increase in real expenditures on research and development with funds from both the government and private sectors. In the Philippines, research is more of the exception from the rule in institutions of higher learning. The Philippines is yet a long way from the ideal as far as the creation of new knowledge is concerned (De Jesus, 2000).

CHED created the National Higher Education Research Agenda (NHERA) for 1998-2007 to look into the research concerns and problems of HEIs in the Philippines. The formulation of NHERA re-emphasized research as the main concern of higher education in supporting and enhancing both instruction and extension services in all HEIs, therefore differentiating higher education from basic education. It also re-highlighted the role of higher education in responding to the country's workforce and development needs and its role in developing high-level professionals who will research for new knowledge. CHED- NHERA's vision for Philippine HEIs was made clear and stated: *In the Philippines where the culture and environment for research are not well-developed, it is essential for the institutions to emphasize research to enable this country to join the ranks of world-class nations.*

For HEIs, to be able to respond to these challenges and fulfill their research function, CHED recommended the institutionalization of research as an integral

part of the academic preparation of the faculty and students, along with the provision of adequate resources.

It is clear, therefore that CHED recognizes that a mandate and even a series of legislative acts are not enough to convert HEIs into research institutions they are envisioned to be. Bernardo (1999) averred that while research could really play a vital role in generating knowledge that could shape higher education reform and policy, productive research should, however, be done in an environment open to change and development.

The Accrediting Agency of Chartered Colleges and Universities (AACCUP) in the Philippines is created to realize the need to re-engineer SUCs into institutions not only of quality instruction and extension services but also of productive and interdisciplinary researches. To encourage the development of research culture among its member institutions, Research is one of the ten areas of accreditation. In its primer, research indicators survey an institution along: 1) research priorities and relevance, 2) funding, institutional support, and other resources, 3) research outputs, 4) publication, dissemination and utilization, 5) impact of research on community development, and 6) research linkages.

Cognizant to the need of time, the UNP President Arce's administration envisions a University par excellence, and one of his 10 Governance Initiatives to achieve quality and excellence is Fostering and supporting scholarly activity and creative research, hence, it is one of the four functions of the University. Supporting this mandate, the University Research Office (URO) of the UNP as the center of research activities, has conducted several planning workshops, commodity and in-house reviews, and capability enhancement programs to encourage administrators, faculty and staff to conduct researches in particular and to develop the research culture of the University in general. It is at this juncture that the researchers decided to undertake a study on the research capability and performance of the University to look into its activities in the past five years. Likewise, this endeavor could be a basis to improve the research programs and activities of the University.

### Conceptual Framework

This study revolved around a paradigm as illustrated below:

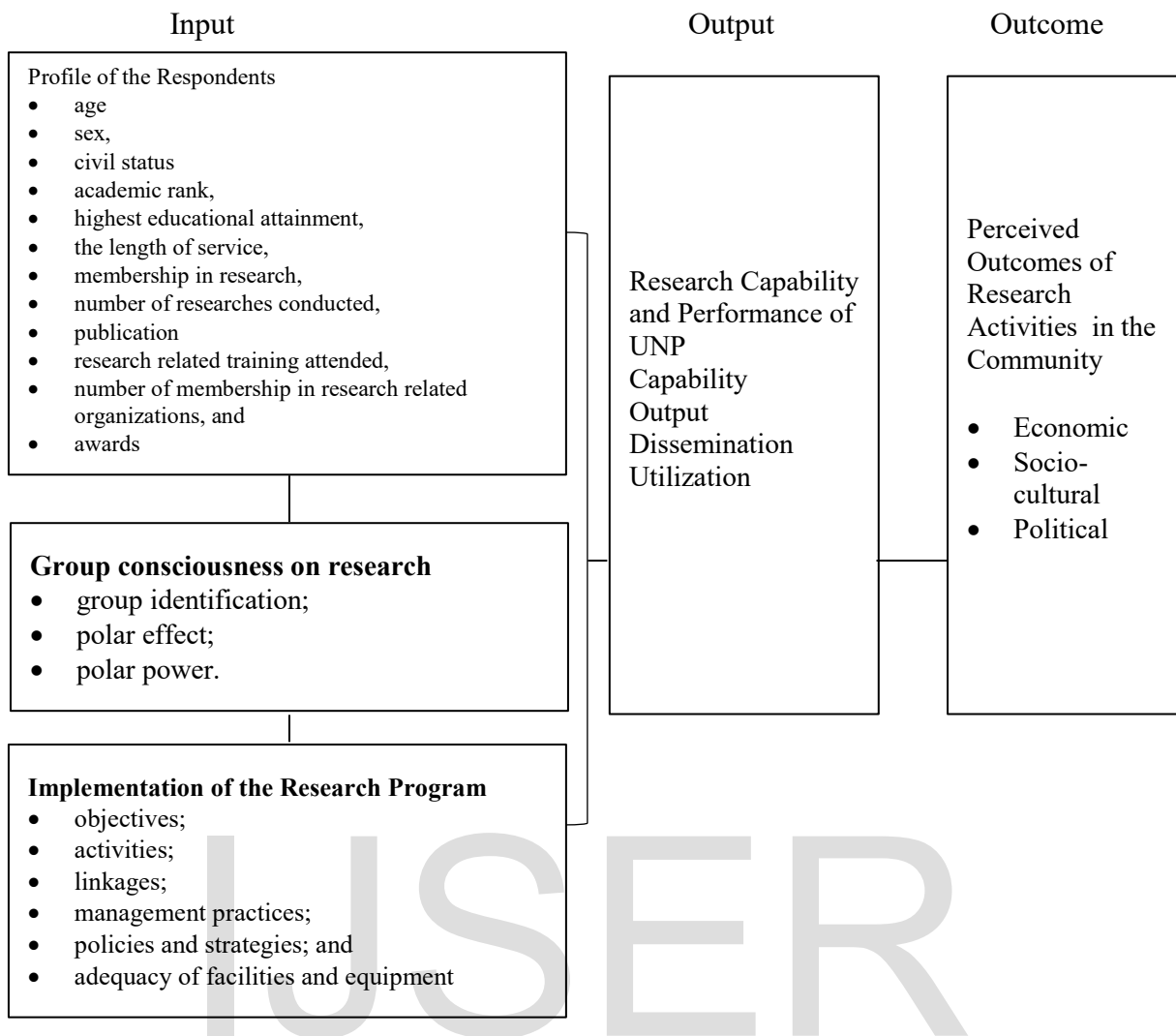


Figure 1. The Research Paradigm

### Objectives

This study aimed to determine the institutional research capability and performance of the University of Northern Philippines, during the School Year, 2011 to 2015. Specifically, it determined the profile of the respondents along the following human resource factors: age, sex, civil status, academic rank, highest educational attainment, length of service, number of researches conducted Publication, related-research training attended, membership in research related organizations, and awards. It looked into the level of group consciousness of the respondents regarding group identification, and polar affect, and power; it determined the level of implementation of the Research Program of UNP along: objectives; activities; linkages; management practices; policies and strategies; and adequacy of facilities and equipment. It also tried to determine the research capability and

performance of UNP along: capability, output, dissemination, and utilization.

It also studied the economic, socio-cultural, and political outcomes in the community of the research activities of UNP as perceived by the respondents. Finally, it determined if research capability and performance of UNP were significantly influenced by the following: profile of the respondents; level of group consciousness of the respondents; and level of implementation of the Research Program of UNP.

### Methodology

The study used the descriptive-correlational method. The 88 respondents who were involved in this study were the administrators, and faculty of the University who conducted researches from 2010 to 2015. Total enumeration was targeted, but only 73% responded during the data gathering period.

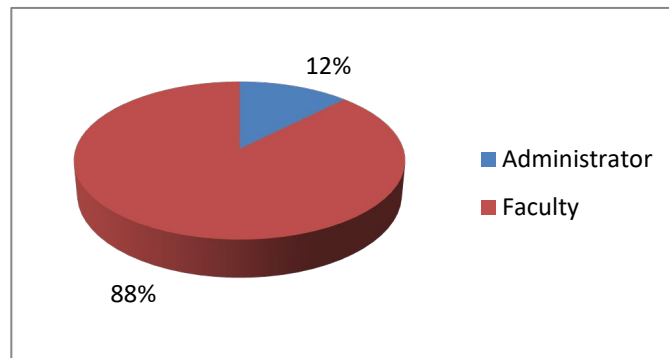


Figure 1. Respondents of the Study

The instruments used were adapted from Rosal (2004) with slight modification to suit the need of the present study. It consisted of five parts namely: Part I. Personal information sheet, elicited information on the profile of the respondents; Part II. Group Consciousness, dealt on the consciousness of the respondents along group identification, polar affect and polar power of the research program; Part III. Research Program, drawn responses on the level of implementation of the research program of UNP along attainment of objectives, activities, linkages, management practices, policies and strategies

and adequacy of facilities and equipment; Part IV. Research Capability and Performance, elicited responses on research capability, dissemination, and utilization; Part V. Perceived Outcomes of Research Activities in the Community, elicited responses on the effects of research activities of UNP along economic, socio-cultural and political.

The researchers used the following norms to interpret the study:

On Level of Group Consciousness, Implementation of the UNP Research Program and research capability and performance of UNP

Range of Ratings	Overall DR
4.21-5.00	Very High (VH)
3.41-4.20	High (H)
2.61-3.40	Fair (F)
1.81-2.60	Low (L)
1.00-1.80	Very Low (VL)

On Level of Dissemination/ Utilization

Range of Ratings	Item DR	Overall DR
4.21-5.00	Much Implemented (MI)	Very High (VH)
3.41-4.20	Implemented (I)	High (H)
2.61-3.40	Moderately Implemented (Mi)	Fair (F) Fair
1.81-2.60	Not So much Implemented (NSMI)	Low (L)
1.00-1.80 (VL)	Not At All Implemented (NAI)	Very Low

### On Perceived Outcomes on the Community of Research Capability and Performance

Range of Ratings	Item DR	Overall DR
4.21-5.00	Highly Agree (HA)	Very High (VH)
3.41-4.20	Agree (A)	High (H)
2.61-3.40	Moderately Agree (MA)	Fair (F)
1.81-2.60	Disagree (D)	Low (L)
1.00-1.80	Very Disagree (VD)	Very Low (VL)

The data on the actual research performance of UNP for the past five years were lifted from the Annual Reports of URO from Year 2011 to 2015.

#### Statistical Treatment of Data

Frequencies and percentages were used to describe the profile of the respondents regarding personal and social factors and the number of researches finished, disseminated and utilized.

Frequency count was also used to describe the media used by the researchers in disseminating researches. Furthermore, frequencies and percentage were computed for each variable, continuous as well as categorical. Mean was used to determine the level of perception of the respondents as to group consciousness, Research Program, Research Capability and Performance, and program's output and impact/outcomes in the community. Multiple Regression Analysis was used to determine the significant influence of the respondents' profile, the level of group consciousness and the level of implementation of the Research Program of UNP on the capability and performance of UNP.

#### Results and Discussion

##### Profile of the Respondents

A great percentage (27 or 30.68%) of the respondents are aged 50-59, teaching for 11-20 years (34 or 38.64%), Assistant Professors (28 or 31.82%), and members of IAMURE (37 or 42.05%), and NRCP and PAIR (27 or 30.68%). Majority are females (45 or 51.14%), married (73 or 82.95%), Master's degree holder (55 or 62.50%), a great percentage never attended a research related training (67 or 76.14%), but a great number (21 or 27.27%) is awarded as Best Oral Presenter.

The higher percentage of female researchers in the University confirms the

statement of Bernstein (2017) that women account for 38% to 49% of researchers in 11 of the 12 countries and regions studied; the report concludes based on Scopus records from 2011 to 2015. Brazil and Portugal have the largest proportion of female researchers at 49%, and Denmark saw the highest change over time, with a 12 percentage point increase as compared with analysis of data from 1996 to 2000.

##### Level of Group Consciousness

As to the level of group consciousness in research, the respondents are Fair ( $\bar{X}=3.21$ ) on the overall and along group identification ( $\bar{X}=3.16$ ), polar effect ( $\bar{X}=2.78$ ), and power ( $\bar{X}=3.68$ ). The result means that, in the conduct of researches the respondents' encountered problems, however solutions sought by the administration are sometimes supported by them, and they are of the same aspirations for the betterment of the University. They are also at the midway of agreeing and disagreeing as to the limitations of research such as research mentoring services extended and, assistance to build research capability, as well as the rewards in conducting research.

This finding conforms to Rosal (2004) who found that the researchers were not sure of the items of polar effect and polar power, though they were high along group identification. The group consciousness of the respondents could be looked into by the research administrators because it could affect the attitudes and behavior of the researchers to increase their participation especially to those who are no longer conducting research works.

##### The Level of Implementation of the UNP Research Programs

The level of implementation of the research programs of UNP is Very High ( $\bar{X}=4.35$ ). Supporting this is the very high

implementation of the research activities ( $\bar{X}$  =4.46), policies, and strategies ( $\bar{X}$  =4.45), management practices ( $\bar{X}$  =4.41), linkages ( $\bar{X}$  =4.36), and adequacy of facilities and

equipment ( $\bar{X}$  =4.31) of the research programs of UNP. Only the implementation of the objectives of the research programs is rated high ( $\bar{X}$  =4.08).

**Table 1. Summary on the Level of Implementation of the UNP Research Programs**

Items	$\bar{X}$	DR
Objectives	4.08	High
Research Activities	4.46	Very High
Linkages	4.36	Very High
Management Practices	4.41	Very High
Policies and Strategies	4.45	Very High
Adequacy of Facilities and Equipment	4.31	Very High
<b>Overall</b>	<b>4.35</b>	Very High

The above results imply that the University implemented very well its research programs; however, there is a need to strengthen the attainment of objectives to generate globally competitive functional studies on projects primarily on agro-forestry and natural sciences.

This result conforms to Rosal (2004) who concluded that the components of the UNP research program are all implemented, and has strengths and weaknesses, and to Alim and Diocolano (2011) who conducted a study on the research capability of SUC's in Region XII and found out that the vision, mission, goals, objectives, agenda and priorities, policies and guidelines monitoring and evaluation, network and linkages are

high. However, it contradicts to Pardo (2006) who concluded that policies on research and extension of ISPSC should be clarified and she recommended that faculty members are encouraged to conduct more researches and should involve themselves in more extension activities, and linkages with other agencies should also be strengthened.

**Level of Research Capability and Performance of UNP**

The summary of the level of research capability and performance of the UNP along capability is presented in Table 2.

**Table 2. Summary of the Research Capability and Performance of UNP along Capability**

Items	$\bar{X}$	DR
Administrative Capability	4.49	Very High
Organizational Harmony	4.39	Very High
Capability to Ensure Compliance	4.45	Very High
Personnel Capability	4.40	Very High
Fiscal Capability	4.34	Very High
Conceptual Skills	4.48	Very High
Computational Skills	4.44	Very High
Technical Skills	4.42	Very High
<b>Overall</b>	<b>4.43</b>	Very High

The respondents perceived that the administrative capability ( $\bar{X}=4.49$ ), organizational harmony ( $\bar{X}=4.39$ ), capability to ensure compliance ( $\bar{X}=4.45$ ), personnel capability ( $\bar{X}=4.40$ ), and fiscal capability ( $\bar{X}=4.41$ ) of the UNP research administrators are Very High. This means that researchers are very satisfied about the capability of the Research Director and Coordinators in the formulation of research objectives and agenda, and implementing methods and standards in achievable terms, and the provision of reduction of teaching load and granting of leave credits to researchers. Likewise, the researchers were very satisfied that the research staff share cooperation and all-out support to researchers, and they safeguarded the granting of points for NBC evaluation, leave credits or honoraria, and travelling expenses etc. and provisions of supplies/materials, able to coordinate, conduct, disseminate researches as well as assisting and unifying researchers, and they are capable of appropriating budget for approved researches.

Moreover, the respondents perceived that the research capabilities of UNP along conceptual, computational and technical skills are also Very High as supported by the mean ratings of 4.48, 4.44 and 4.42 respectively. This means that researchers of UNP are very much capable in identifying research and instructional problems and in transforming the problems into research problems, to analyze and interpret outcomes of the study, and to formulate specific findings and draw conclusions and recommendations.

Also, researchers of UNP are Very Much capable in identifying and using appropriate statistical tools in analyzing data,

and in handling correct data, observing correct mechanics of theses/dissertation writing and the use of computer in analyzing data.

As a whole, the perceived research capability and performance of UNP is Very High with a mean rating of 4.43. All the eight indicators of research capability and performance are all rated Very High with the administrative capability that obtained the highest rating and fiscal capability as the lowest. These findings conform to that of Dela Cruz (2015) who concluded that the administrative capability of research administrators of ISPSC is high (3.48).

### Actual Research Capability and Performance of UNP

As an instrument in transforming society, research is one of the quadruple functions of the UNP in compliance to P.D 1788 and as provided for in RA 7722 that faculty and personnel are encouraged to engaged quality research. Activities include proposal preparation, presentation and submission for in-house reviews, and conduct of the study, in-house review of completed output, and dissemination and publication of the results and research capability enhancements. Support to intensify the research activities was included in the revision of the UNP Code in December 2014 by virtue of Board Resolution no. 99 s. 2014.

As seen in Table 3, a total of 328 completed researches have been completed for the past five years. A great percentage (296 or 90.34%) of the completed researches were presented in international (162), national (86) and regional/local(48) research fora, while 200 or 60.98% were published internationally (105), nationally (35) and regionally/locally (60).

**Table 3. Actual Performance of UNP along Researches Conducted**

	2011	2012	2013	2014	2015	Total
<b>Completed Researches</b>	24	80	76	73	75	328
<b>Dissemination/Presentation</b>						
International	27	32	32	27	44	162
National	9	9	21	23	24	86
Regional/Local	-	3	7	37	1	48
<b>Publication</b>						
International	3	14	41	35	12	105



National	12	9	6	5	3	35
Regional/Local	-	11	11	26	12	60
<b>Number of Researchers</b>	20	41	97	116	85	359
<b>Capability Building Conducted</b>	-	5	7	15	6	33
<b>Citations</b>	6	7	12	6	6	42
<b>Awards</b>	19	11	47	16	23	116
<b>Patented</b>						

Sources: URO Data

The high number of completed, disseminated and published researches is a manifestation of the very high research capability and performance of the UNP research administration observed in the previous findings of this study. This is also supported by the conduct of research capability building programs of UNP which include but not limited to colloquium, in-house reviews, trainings and conferences.

However, very few (42 or 12.80%) of the completed research outputs were cited. This aspect should be looked into by the researchers and research administrators for citation improvement like publication to online, open access refereed journals. This result is similar with the global trends that articles are inaccessible and it affects the chances of being cited by other researchers (Eysenbach, 2006).

On the other hand, many of the researchers who presented their studies in national and international arena received awards like Best Oral Presenter, Outstanding World Leader, Outstanding Filipino Research leader, etc. The University President was an Outstanding Global Research Leader in 2012 and the University Research office with the Global Diamond Award for Best University Research Development Program in 2012, for the completion of 67 researches, 105 national and oral presentation, 45 peer reviewed

publications of the faculty, 8 prototype machines which earned national and international awards for the faculty researches in the last three years, making R & D program a model of research productivity and relevance for other universities in the Asia Pacific Region.

These results are outcomes of the strong support of the University to foster scholarly activities and creative research programs as evidenced by the completed researches of the University of Northern Philippines faculty and students.

As to the research capability and performance of UNP along dissemination and utilization of researches, the respondents perceived it as very high with mean ratings of 4.38 and 4.28 respectively. All the items rated under each of these aspects were rated as Much Implemented. The positive ratings of the respondents on the research capability and performance of UNP along dissemination/presentations are certain as manifested by the 162 international, 86 national and 48 regional/local presentations undergone by the researchers of the University and the publication of research works to the international, national and local arena. The good number of research outputs, disseminations, and publications resulted also to the attainment of the UNP to Level IV SUC leveling status in 2016.

**Table 4. Research Capability and Performance of UNP along Dissemination and Utilization**

Items	$\bar{X}$	DR
<b>Dissemination</b>		
1. Encourage faculty and researchers to present research findings to target clientele.	4.42	MI
2. Encourage faculty and researchers to present research findings in different conferences, fora, and formal and informal meetings.	4.48	MI
3. Encourage the faculty and researchers to package mature technologies for widespread dissemination.	4.34	MI
4. Promote the transfer of developed technologies.	4.31	MI
5. Establish and maintain a repository of research information.	4.39	MI

6. Require the faculty and the researchers to abstract research findings for publication purposes.	4.34	MI
7. Initiate and support the build-up of research database.	4.38	MI
<b>Mean</b>	<b>4.38</b>	<b>VH</b>
<b>Utilization of Researches</b>		
1. Promote the production of devices.	4.22	MI
2. Use of research results on policy- making.	4.28	MI
3. Research output is utilized to the development of administrators, faculty and staff of research.	4.30	MI
4. Utilize the results of research to improve and develop curriculum.	4.31	MI
5. Findings of research are utilized to improve the instruction.	4.24	MI
6. Results are used to develop community and extension services.	4.27	MI
7. Use research results to solve problems.	4.31	MI
<b>Mean</b>	<b>4.28</b>	<b>VH</b>

Furthermore, research outputs are utilized primarily for community and extension services, and improvement of instruction they were used in the production and development of devices and policy making. This finding contradicts that of De Jesus' (2000) study that the Philippines is yet a long way from the ideal as far as the creation of new knowledge is concerned.

**Economic, Socio- Cultural and Political Outcomes on the Community of the Research Capability and Performance of UNP**

The economic, socio- cultural and political outcomes are the visible results or consequences of the Research Capability and Performance of UNP to the community. The result of the perception of the respondents is revealed in Table 5.

**Table 5. Economic, Socio- Cultural and Political Outcomes on the Community of the Research Activities of UNP as Perceived by the Respondents**

Items	$\bar{X}$	DR
<b>Economic Outcomes</b>		
Target beneficiaries gained economically from the researches conducted.	4.17	A
Researches provided increase of annual income of farmers, fisherman, skilled workers, etc.	4.08	A
Researches provided food security to the aforesaid beneficiaries.	4.01	A
Researches provided secured future financially to the beneficiaries.	4.06	A
Researches provided on advanced technology to the aforesaid beneficiaries.	4.01	A
<b>Mean</b>	<b>4.07</b>	<b>H</b>
<b>Socio-cultural Outcomes</b>		
The target beneficiaries gained socio- culturally from the researches	4.25	HA
Researches provided better health and nutrition to the targeted beneficiaries, i.e., mothers, children, elders, students, pupils, etc.	4.24	HA
Researches provided a more responsive curriculum for students, pupils, etc.	4.13	A
<b>Mean</b>	<b>4.21</b>	<b>VH</b>
<b>Political Outcomes</b>		
Targeted beneficiaries gain politically from the researches conducted.	4.22	HA
Researches provided responsiveness of local government officials, line agencies' administrator, and universities and colleges (SUCs) administrators, faculty and non-teaching employees and the Department of Education administrators and teachers.	4.30	HA
Researches inspired the aforementioned officials, administrators and employees to have political will.	4.29	HA
<b>Mean</b>	<b>4.27</b>	<b>VH</b>
<b>Grand Mean</b>	<b>4.18</b>	<b>H</b>

Norms:

Range of Ratings	Item DR	Overall DR
4.21-5.00	Highly Agree (HA)	Very High (VH)
3.41-4.20	Agree (A)	High (H)
2.61-3.40	Moderately Agree (MA)	Fair (F)
1.81-2.60	Disagree (D)	Low (L)
1.00-1.80	Very Disagree (VD)	Very Low (VL)

The respondents perceived that the economic outcomes of researches conducted by UNP are high with mean rating of 4.07. The respondents agree that the researches conducted, benefited the target clientele, able to increase their annual income, and provided them secured financial future, food security and advanced technology. The lower perceived economic outcome is associated with the very few researches conducted that could possibly generate income or advance technology. A very high perception is observed as to the socio-cultural outcomes of the researches conducted by UNP as supported by the mean rating of 4.21. This means that the respondents perceived that the target beneficiaries gained socio-culturally, and provided better health and nutrition, and a more responsive curriculum from the researches conducted.

Likewise, the respondents perceived a very high ( $\bar{X}=4.27$ ) political outcomes of the

researches conducted by UNP as manifested by their highly agreement in all the three items rated. This means that the researches conducted are responsive and provided greater political will to target beneficiaries.

The above findings also conform to Rosal (2004) who stated that researches have high economic, socio- cultural and political outcomes, but it contradicts to that of Dela Cruz (2015) result ,which mentioned that respondents were not sure of the impact of researches they conducted.

**Regression Analysis of Research Capability and Performance of UNP on the Dependent Variables**

Table 6 shows the results of the regression analysis on research capability and performance of UNP and the dependent variables: profile and group consciousness of the respondents, and the implementation of research programs.

**Table 6. Regression Analysis of Research Capability and Performance of UNP on the Independent Variables**

Model	Independent Variables	Beta	t-value	t-prob
1	Group consciousness	.338	2.939	.004
2	Sex	.234	2.339*	.022
	Group consciousness	.306	3.052*	.003

Mult R = .302	Mult R = .382
R2 = .091	R2 = .146
F-Ratio= 8.635	F-Ratio= 7.277
F-prob = .004	F-prob = .001

Model 1 in the table shows that the research capability and performance of UNP is significantly influenced only by the group consciousness of the respondents (Sig F=.004) when taken as a whole. The Mult R of .302 suggests that when the variables are taken into combination, they have a high influence on the research capability and performance of UNP. The R2 value of .091 implies that 9.1 percent of the variance of the dependent variable is explained by the independent variables considered in the

analysis, and 90.9 percent is attributed to other factors not included in the study. When variables are taken singly the components of group consciousness, the  $\beta= .338$ , sig t = .004 indicates that they are predictors of the research capability and performance of UNP. This implies that the higher the group consciousness of the respondents, the higher is the research capability and performance of UNP.

Model 2 shows that only sex ( $\beta=-.234$ ), and group consciousness ( $\beta=.306$ ),

when taken as a whole, tend to significantly influence the research capability and performance of UNP. As a whole, the research capability and performance of UNP is significantly influenced only by the group consciousness and sex of the respondents (Sig F=.001). The Mult R of .382 suggests that when the variables are taken into combination, they have a high influence on the research capability and performance of UNP. The R<sup>2</sup> value of .146 implies that 14.6 percent of the variance of the dependent variable is explained by the independent variables considered in the analysis, and the bigger percentage is attributed to other factors not included in the study.

This is supported by Wichian, et al. (2009) who found that research productivity was affected by direct correlation with the researchers' characteristics, research competence and institutional research-promoting characteristics. This implies that instructors who are capable in research skills and technique, funding skills, research management and research communication skills and networking and team-work would likely produce high research productivity.

### Conclusions

A great percentage of the respondents are aged 50-59, teaching for 11-20 years, Assistant Professors and members of NRCP, IAMURE and PAIR. The majority are females, married and Master's degree holders. A great majority never attended research related training, and a substantial number are awarded as Best Oral Presenters.

The respondents' group consciousness is fair. The University of Northern Philippines had been performing well on the implementation of research program and very high along its capability and performance in terms of capability, output, dissemination and utilization as well as the economic, socio-cultural and political outcomes of researches conducted. The research capability and performance of UNP are significantly influenced by the group consciousness and sex of the respondents

### Recommendations

Administrators, faculty and staff should be sent for research trainings, seminar-workshops and presentations regionally, nationally and internationally. Seminars should also be conducted to improve group

consciousness and awareness of the importance of research collaboration, and trainings for publication to refereed and online journals be initiated. Awards and more incentives should be given to faculty researchers who won internationally and published their articles in refereed journals. College research coordinators should properly disseminate memoranda, planned activities and meetings to their constituents. Since staff are not involved and not all administrators and faculty members are conducting researches, coordinators should mentor and monitor them closely so they will all be engaged in research and complete what they propose. Generation of income, invention of advance technology of the researches conducted and technology transfer should be considered.

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